AMERICAN

MANUAL OF CARPENTRY



AND CATALOG OF

NAILS

AMERICAN STEEL & WIRE COMPANY
UNITED STATES STEEL

C A Bartlett
13 Pine St.
Fairhaven

C A T A L O G O F

AMERICAN NAILS

WITH SPECIFICATIONS AND DATA

COVERING STAPLES, WIRE, BARBED WIRE,

TACKS, POULTRY NETTING, SPIKES, ETC.

Subject to Change Without Notice

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Foreword

For generations, American Steel and Wire Company has been producing nails of highest quality. Such present day nail features as "perfect analysis steel, sharp points, and well centered, uniform, sturdy heads" have been built into American quality nails for many years. Progress, research, and development, especially in American Steel and Wire Company, have been constant, steady, and outstanding, and today as for generations past, American nails have maintained their enviable reputation of leadership and highest quality.

AMERICAN STEEL & WIRE COMPANY
CLEVELAND · CHICAGO · NEW YORK
and All Principal Cities

UNITED STATES STEEL

BRIGHT STANDARD NAILS STOCK SIZES ONLY

EXTRAS PER 100 LBS. — IN KEGS

Effective August 1, 1939

Common

2d	$2.10
3d	1.60
4d	.95
5d	.85
6d	.70
7d	.60
8d	.50
9d	.45
10d	.40
12d	.40
16d	.35
20d	.35
30d	.35
40d	.35
50d	.35
60d	.35

Common Brads

2d	$2.15
3d	1.65
4d	1.00
5d	.90
6d	.75
7d	.65
8d	.55
9d	.50
10d	.45
12d	.45
16d	.40
20d	.40
30d	.40
40d	.40
50d	.40
60d	.40

Kuphed style furnished on request at no extra charge.

Blued Sterilized Lath

2d	$3.10
2d Light	3.45
3d	2.45
3d Light	2.75

Hook Head Lath

1⅜″ x 12 Bright	$2.50

Fence

5d	$ .70
6d	.65
7d	.50
8d	.45
9d	.40
10d	.40
12d	.35
16d	.35
20d	.35

Box

	Smooth	Barbed
2d	$2.15	$2.15
3d	1.80	1.85
4d	1.25	1.30
5d	1.15	1.20
6d	.95	1.00
7d	.85	.90
8d	.70	.75
9d	.65	.70
10d	.60	.65
12d	.60	.65
16d	.60	.65
20d	.45	.50
30d	.40	.45
40d	.40	.45

Finishing

2d	$2.65
3d	1.95
4d	1.65
5d	1.55
6d	.95
7d	.85
8d	.65
9d	.60
10d	.55
12d	.55
16d	.55
20d	.40

Kuphed style furnished as standard unless otherwise specified.

Siding

5d	$1.30
6d	.95
7d	.85
8d	.70
9d	.65
10d	.60

Fine

2d	$2.75
2d Extra	3.10
3d	2.10
3d Extra	2.40

Clout

Duck Bill Points

¾″ x 15	$3.35
⅞″ x 14	2.75
1″ x 14	2.60
1⅛″ x 14	2.50
1¼″ x 13	2.10
1⅜″ x 13	1.90
1½″ x 13	1.80

Standard Flooring Brads

6d	$ .75
7d	.65
8d	.55
9d	.50
10d	.45
12d	.45
16d	.40
20d	.30
2½″ x 11	.60

Kuphed style furnished on request at no extra charge.

Ideal Flooring Brads

Blunt Points

3d	$2.05
4d	1.65
5d	1.55
6d	1.20
7d	1.05
8d	.95
9d	.90
10d	.85
12d	.85
16d	.80
20d	.65

Machine Flooring Brads

1″ x 15 Bright	$4.65

Casing

2d	$2.20
3d	1.70
4d	1.30
5d	1.20
6d	.85
7d	.75
8d	.60
9d	.55
10d	.50
12d	.50
16d	.50
20d	.35
30d	.30
40d	.30

Kuphed style furnished as standard unless otherwise specified.

Slating

2d	$1.60
3d	1.20
4d	.95
5d	.85
6d	.75

Refer to **important note** on page 13. For **special features** refer to page 12. For coatings, finishes and special packages refer to page 13.

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Wire Spikes

Flat Head — Diamond Point

20d—4″ x 4 gauge	$ .35
30d—4½″ x 3 gauge	.35
40d—5″ x 2 gauge	.35
50d—5½″ x 1 gauge	.45
60d—6″ x 1 gauge	.45
7″ x 5/16″	.45
8″ x 3/8″	.45
9″ x 3/8″	.60
10″ x 3/8″	.60
12″ x 3/8″	.60
Oval Heads	.15
Chisel Points	.15

For Wire Spikes in other lengths and gauges refer to special tables for extras on non-stock special sized nails and wire spikes.

Shingle — Standard

3d (1/4″ head)	$1.35
3½d (9/32″ head)	1.20
4d (9/32″ head)	1.10
5d (9/32″ head)	1.00
6d (9/32″ head)	.95
3d (5/16″ head)	1.70
3½d (5/16″ head)	1.35
4d (5/16″ head)	1.25

Shingle — Asbestos

13/32″ Head — Needle Point

	Barbed	Smooth
1″ x 11½ gauge	$1.85	$1.85
1⅛″ x 11½ gauge	1.85	1.80
1¼″ x 11½ gauge	1.70	1.65
1½″ x 11½ gauge	1.65	1.60
1¾″ x 11½ gauge	1.55	1.50
2″ x 11½ gauge	1.50	1.45

Gutter Spikes

Flat Head — Diamond Point

6½″ x 1/4″	$ .75
7″ x 1/4″	.75
8″ x 1/4″	.75
8½″ x 1/4″	.75
9″ x 1/4″	.75
10″ x 1/4″	.75
10½″ x 1/4″	.75
7″ x 5 gauge	.85
8″ x 5 gauge	.85
7″ x 6 gauge	.90
7″ x 3/16″	.95
7″ x 8 gauge	1.00
Oval Heads	.15
Chisel Points	.15

For Gutter Spikes in other lengths and gauges refer to special tables for extras on non-stock special sized gutter spikes.

Shingle — Ideal

Blunt Point — 1/4″ Heads

3d	$1.60
3½d	1.50
4d	1.05

Shingle — Red Cedar

3d	$1.80
4d	1.25
5d	1.15
6d	1.05

Shingle — Wood

1/4″ Head

1¾″ x 13 gauge	$ .95

Plaster Board — Smooth

Blued

	5/16″ Heads	3/8″ Heads
1″ x 13	$2.35	$4.50
1⅛″ x 13	2.30	4.40
1¼″ x 13	2.05	4.30
1½″ x 13	2.00	4.15
1¾″ x 13	1.95	4.05

Plaster Board — Smooth

Bright — Large Head

	9 Gauge 1/2″ Head	10 Gauge 1/2″ Head	11 Gauge 7/16″ Head
1″	$1.40	$1.55	$1.70
1¼″	1.20	1.30	1.50
1½″	1.15	1.25	1.40

Refer to **important note** on page 13. For **special features** refer to page 12. For coatings, finishes and special packages refer to page 13.

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Dowel Pins

Kuphed — Barbed

	8 Gauge	9 Gauge	10 Gauge	11 Gauge	12 Gauge
5/8"	$1.90	$2.10	$2.25	$2.45	$2.60
3/4"	1.80	1.90	2.05	2.20	2.45
7/8"	1.70	1.80	1.95	2.10	2.30
1"	1.55	1.70	1.85	1.90	2.05
1 1/8"	1.45	1.60	1.75	1.80	1.95
1 1/4"	1.35	1.45	1.65	1.70	1.75
1 3/8"	1.25	1.35	1.55	1.60	1.65
1 1/2"	1.15	1.25	1.40	1.50	1.55
1 5/8"	1.15	1.25	1.40	1.50	1.55
1 3/4"	1.05	1.15	1.30	1.35	1.45
2"	1.00	1.10	1.25	1.30	1.40

Car — Light

Barbed

	Oval Ctsk. Head	Flat Ctsk. Head
4d	$1.15	$1.05
5d	.90	.80
6d	.85	.75
7d	.70	.60
8d	.65	.55
9d	.60	.50
10d	.60	.50
12d	.60	.50
16d	.55	.45
20d	.55	.45
30d	.55	.45
40d	.55	.45
50d	.55	.45
60d	.55	.45

Clinch

Oval Heads — Duck Bill Points

2d	$2.75
3d	2.25
4d	1.60
5d	1.50
6d	1.35
7d	1.25
8d	.90
9d	.85
10d	.70
12d	.70
16d	.65
20d	.55

Car — Heavy

Barbed

	Oval Ctsk. Head	Flat Ctsk. Head
4d	$1.00	$ .90
5d	.85	.75
6d	.80	.70
7d	.70	.60
8d	.65	.55
9d	.60	.50
10d	.60	.50
12d	.55	.45
16d	.55	.45
20d	.55	.45
30d	.55	.45
40d	.55	.45
50d	.55	.45
60d	.55	.45

Boat

Oval Ctsk. Head — Chisel Point

	Light	Heavy
4d	$1.05	$1.15
6d	.90	.95
8d	.75	.80
10d	.75	.85
12d	.75	.85
16d	.75	.85
20d	.65	.75

Broom

5/8" x 15	$2.70
3/4" x 15	2.35
5/8" x 14	2.25
3/4" x 14	2.10

Hinge — Light

Chisel Point

	Oval Head	Flat Ctsk. Head
4d	$1.05	$ .95
6d	.90	.80
8d	.75	.65
10d	.75	.65
12d	.75	.65
16d	.75	.65
20d	.65	.55

Hinge — Heavy

Chisel Point

	Oval Head	Flat Ctsk. Head
4d	$1.15	$1.05
6d	.95	.85
8d	.80	.70
10d	.85	.75
12d	.85	.75
16d	.85	.75
20d	.75	.65

Dating—Round

1 1/2" x 1/4"	$2.50
1 3/4" x 1/4"	2.25
2" x 1/4"	2.00
2 1/2" x 1/4"	1.75
1 1/2" x 5/16"	2.50
1 3/4" x 5/16"	2.25
2" x 5/16"	2.00
2 1/2" x 5/16"	1.75

Square nails in above gauges, $.50 per 100 lbs. extra.

Refer to **important note** on page 13. For **special features** refer to page 12. For coatings, finishes and special packages refer to page 13.

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Duplex Head

1¾″ x 11½	$4.50
2¼″ x 10¼	3.50
2¾″ x 9	3.00
3″ x 8	2.60
3½″ x 6	2.40
4″ x 5	2.20

Length under lower head

Hoop Fasteners

Bright

No. 0	$1.55
No. 1	1.65
No. 2	2.20
No. 3	3.50

Beer Case Strap

Oval Heads
Diamond Points

1¼″ x 13	$1.50
1½″ x 12½	1.10
1¾″ x 12	1.00
2″ x 11½	.85

Beer Case Hinge — Lock — Latch Plate

Oval Heads
Duck Bill Points

5/8″ x 14	$3.15
¾″ x 14	3.00
5/8″ x 13	3.00
¾″ x 13	2.85
7/8″ x 13	2.70
1⅛″ x 13	2.35
1¼″ x 13	2.25
1 5/16″ x 13	2.15

Beer Case Cleat

Oval Heads
Duck Bill Points

1⅛″ x 14½	$2.65
1″ x 14	2.75
1⅛″ x 13	2.35
1 3/16″ x 13	2.35
1¼″ x 13	2.25
1 5/16″ x 13	2.15
1⅜″ x 13	2.05
1 5/8″ x 12½	1.60
1⅞″ x 12	1.50

Carnegie Hoop

½″ x 12	$2.70
5/8″ x 13	2.35
¾″ x 13	2.20
7/8″ x 13	2.05
7/8″ x 12	1.80
1″ x 13	1.95
1⅛″ x 13	1.70
1⅛″ x 12½	1.60
1⅛″ x 12	1.50
1¼″ x 13	1.60
1⅜″ x 13	1.40

Barrel

5/8″ x 15½	$3.05
¾″ x 15½	2.75
7/8″ x 14½	2.15
1″ x 14½	2.00
1⅛″ x 14½	1.90
1¼″ x 14	1.75
1⅜″ x 13	1.40
1½″ x 13	1.20

Roofing — Large Head

	10 Gauge ½″ Head		10 Gauge 7/16″ Head		10½ Gauge 7/16″ Head	
	Barbed	Smooth	Barbed	Smooth	Barbed	Smooth
¾″	$1.70	$1.70	$1.65	$1.65	$1.75	$1.75
7/8″	1.60	1.60	1.55	1.55	1.65	1 65
1″	1.55	1.55	1.50	1.50	1.60	1.60
1⅛″	1.50	1.45	1.50	1.45	1.60	1.55
1¼″	1.35	1.30	1.30	1.25	1.45	1.40
1½″	1.30	1.25	1.25	1.20	1.35	1.30
1¾″	1.25	1.20	1.20	1.15	1.30	1.25
2″	1.20	1.15	1.15	1.10	1.25	1.20

	11 Gauge 7/16″ Head		12 Gauge ⅜″ Head	
	Barbed	Smooth	Barbed	Smooth
¾″	$1.85	$1.85	$2.05	$2.05
7/8″	1.75	1.75	1.95	1.95
1″	1.70	1.70	1.80	1.80
1⅛″	1.70	1.65	1.80	1.75
1¼″	1.55	1.50	1.65	1.60
1½″	1.45	1.40	1.60	1.55
1¾″	1.40	1.35	1.55	1.50
2″	1.35	1.30	1.45	1.40

Refer to **important note** on page 13. For **special features** refer to page 12.
For coatings, finishes and special packages refer to page 13.

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BRIGHT STANDARD NAILS
STOCK SIZES ONLY

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Roofing — Ideal
Extra Large — Checkered Heads

	10 Gauge 5/8" Head		10½ Gauge 9/16" Head		11 Gauge 9/16" Head	
	Barbed	Smooth	Barbed	Smooth	Barbed	Smooth
¾"	$2.55	$2.55	$2.75	$2.75	$3.15	$3.15
⅞"	2.25	2.25	2.45	2.45	2.85	2.85
1"	2.00	2.00	2.20	2.20	2.65	2.65
1⅛"	1.95	1.90	2.15	2.10	2.55	2.50
1¼"	1.85	1.83	2.05	2.00	2.45	2.40
1½"	1.75	1.70	1.95	1.90	2.35	2.30
1¾"	1.65	1.60	1.85	1.80	2.25	2.20
2"	1.60	1.55	1.80	1.75	2.20	2.15

	11 Gauge ½" Head		12 Gauge ½" Head		12 Gauge 7/16" Head	
	Barbed	Smooth	Barbed	Smooth	Barbed	Smooth
¾"	$3.00	$3.00	$3.55	$3.55	$3.40	$3.40
⅞"	2.70	2.70	3.25	3.25	3.10	3.10
1"	2.50	2.50	3.05	3.05	2.90	2.90
1⅛"	2.40	2.35	3.00	2.95	2.85	2.80
1¼"	2.30	2.25	2.90	2.85	2.75	2.70
1½"	2.20	2.15	2.80	2.75	2.65	2.60
1¾"	2.10	2.05	2.65	2.60	2.50	2.45
2"	2.05	2.00	2.60	2.55	2.45	2.40

Smooth head Ideal nails can be furnished at no extra charge.

Roofing — Regular Head

	Barbed	Smooth
¾" x 13	$1.95	$1.95
⅞" x 12	1.70	1.70
1" x 12	1.60	1.60
1⅛" x 12	1.45	1.40
1¼" x 11	1.30	1.25
1⅜" x 11	1.20	1.15
1½" x 10	1.00	.95
1¾" x 10	.90	.85
2" x 9	.80	.75

Roofing — Leakproof

1½" x 9 gauge	$2.55
1¾" x 9 gauge	2.30
2" x 9 gauge	2.10
1½" x 10 gauge	2.80
1¾" x 10 gauge	2.55
2" x 10 gauge	2.35

Berry Box
Diamond Point

	Smooth	Barbed
¾" x 16	$3.05	$3.05
⅞" x 16	2.85	2.85
1" x 16	2.50	2.50
1⅛" x 16	2.40	2.45
1¼" x 16	2.25	2.30
¾" x 17	3.55	3.55
⅞" x 17	3.05	3.05
1" x 17	2.95	2.95
1⅛" x 17	2.75	2.80
1¼" x 17	2.40	2.45

Needle Points — add $.15 per 100 lbs.

Refer to **important note** on page 13. For **special features** refer to page 12. For coatings, finishes and special packages refer to page 13.

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BRIGHT STANDARD NAILS
STOCK SIZES ONLY

EXTRAS PER 100 LBS. — IN KEGS
Effective August 1, 1939

(Continued from preceding page)

Foundry — Smooth

	8 Gauge ½" Head	9 Gauge ½" Head	10 Gauge ½" Head	11 Gauge 7/16" Head
¾"	$1.55	$1.60	$1.70	$1.85
⅞"	1.45	1.50	1.60	1.75
1"	1.40	1.40	1.55	1.70
1⅛"	1.35	1.35	1.45	1.65
1¼"	1.20	1.20	1.30	1.50
1½"	1.15	1.15	1.25	1.40
1¾"	1.10	1.10	1.20	1.35
2"	1.05	1.05	1.15	1.30
2¼"	1.00	1.00	1.10	1.25
2½"	.95	.95	1.05	1.20
2¾"	.95	.95	1.05	1.20
3"	1.10	1.10	1.20	1.35
4"	1.05	1.05	1.20	1.35
5"	1.20	1.20	1.30	1.45
6"	1.20	1.20	1.30	1.45

Refer to **important note** on page 13. For **special features** refer to page 12.
For coatings, finishes and special packages refer to page 13.

(Continued on next page)

SPECIAL FEATURES ON STANDARD NAILS

EXTRAS PER 100 LBS.
Effective August 1, 1939

(Continued from preceding page)

Flat Heads—single blow—smaller than standard	$ .15
Flat Heads—single blow—larger than standard, but not maximum	.15
Flat Heads—single blow—maximum diameters only	
7 gauge and coarser	.15
Finer than 7 gauge to 10 inclusive	.20
10½ gauge	.25
11 and 11½ gauge	.30
12 and finer	.35
Checkered Heads	No charge
Oval Heads	.15
Headless	.15
Flat Countersunk Heads	.05
Brad Heads	.05
Needle Point	.15
Side Point	.15
Chisel Point	.15
Long Diamond Point	.15
Pointless	.15
*Blunt Point	No charge
Duck Bill Points (for fractional gauges use extra for next finer gauge)	
15, 16 and 17 gauge	1.00
13 and 14 gauge	.75
11 and 12 gauge	.50
10 gauge	.25
9 gauge and heavier	.15
Barbed Nails	
*1″ and shorter	No charge
Longer than 1″	$ .05
Blued Nails	Quoted on request
Annealed Nails	Quoted on request
Cement Coated Nails	Quoted on request
Stiff Stock	.25

* Special features showing "no charge" are subject only to quantity extras.

Nails in Standard Sizes but with Above Special Features in Quantities of Less than 25 Kegs are Subject to Following Quantity Extras:

25 Kegs or more	No charge
15 to 24 kegs of a size (incl.)	$ .20
10 to 14 kegs of a size (incl.)	.30
5 to 9 kegs of a size (incl.)	.60
3 and 4 kegs of a size	.75
2 kegs of a size	1.25
1 keg of a size	1.60

Blued, Annealed and Cement Coated Nails in standard sizes, with no other special features, are not subject to above quantity extras. However, nails in these finishes, with additional special features, such as special points, heads, etc., are subject to above quantity extras.

Refer to **important note** on page 13.
For coatings, finishes and special packages refer to page 13.

(Continued on next page)

(Continued from preceding page)

IMPORTANT NOTE — NAILS

All nails shown on pages 6 to 11 are standard and considered as **STOCK ITEMS.**

The same nails with **SPECIAL FEATURES** are considered **NON-STOCK ITEMS** which must be especially manufactured in quantity and style as ordered. Such nails are subject to the regular extra for the standard nail plus extra for special features shown on page 12, plus extra for quantity as shown on page 12.

OTHER NAILS not exactly similar to standard stock items are special and also considered as **NON-STOCK ITEMS.** They are subject to special extras furnished on request.

COATINGS, FINISHES AND HEAT TREATMENTS AVAILABLE ON NAILS AND STAPLES

Galvanized (Hot Process)	Chromium Plated
Galvanized (Electro)	Painted
Cement Coated (Regular)	Acid Etched
Cement Coated (Clear)	Blued
Coppered	Annealed
Tinned	Oil Quench Hardened
Brass Plated	Japanned
Cadmium Plated	Parkerized
Nickel Plated	

Prices quoted on application.

SPECIAL PACKING — NAILS AND STAPLES

In addition to the standard keg holding 100 lbs., nails and staples can also be packed in:

50 lb. wooden keg
50 lb. wooden box or fibre carton
25 lb. " " " " "
5 and 10 lb. " " " " "
¼, ½ and 1 lb. paper cartons

} Prices quoted on request

MISCELLANEOUS WIRE NAILS AND WIRE BRADS

List Prices — Effective February 5, 1940

Per Pound in 100 Lb. Kegs

	Flat Hd. Nails	Brads
3/16″		
20 Ga...	$1.54	$1.78
21 Ga...	2.11	2.41
22 Ga...	2.69	3.08
23 Ga...	3.35	3.93
24 Ga...	3.59	4.36
1/4″		
19 Ga...	$1.10	$1.20
20 Ga...	1.32	1.44
21 Ga...	1.66	1.82
22 Ga...	2.06	2.27
23 Ga...	2.60	2.87
24 Ga...	3.36	3.70
3/8″		
18 Ga...	$ .69	$ .76
19 Ga...	.87	.95
20 Ga...	1.07	1.15
21 Ga...	1.26	1.36
22 Ga...	1.76	1.89
23 Ga...	1.96	2.13
24 Ga...	2.16	2.38
1/2″		
14 Ga...	$ .38	$ .42
15 Ga...	.41	.45
16 Ga...	.45	.49
17 Ga...	.51	.56
18 Ga...	.61	.66
19 Ga...	.74	.81
20 Ga...	.87	.97
21 Ga...	1.04	1.14
22 Ga...	1.41	1.54
23 Ga...	1.51	1.67
5/8″		
13 Ga...	$ .39	$ .42
14 Ga...	.39	.42
15 Ga...	.41	.44
16 Ga...	.46	.49
17 Ga...	.48	.51

	Flat Hd. Nails	Brads
5/8″ (Cont.)		
18 Ga...	$ .54	$ .57
19 Ga...	.64	.69
20 Ga...	.76	.81
21 Ga...	.88	.95
22 Ga...	1.14	1.21
3/4″		
13 Ga...	$ .37	$ .40
14 Ga...	.37	.40
15 Ga...	.38	.41
16 Ga...	.39	.42
17 Ga...	.42	.45
18 Ga...	.48	.52
19 Ga...	.57	.62
20 Ga...	.68	.73
21 Ga...	.79	.84
7/8″		
13 Ga...	$ .35	$ .38
14 Ga...	.36	.39
15 Ga...	.37	.40
16 Ga...	.38	.41
17 Ga...	.40	.43
18 Ga...	.45	.48
19 Ga...	.55	.58
20 Ga...	.63	.67
1″ and 1 1/8″		
12 Ga...	$ .34	$ .37
13 Ga...	.34	.37
14 Ga...	.35	.38
15 Ga...	.35	.38
16 Ga...	.36	.39
17 Ga...	.37	.40
18 Ga...	.43	.46
19 Ga...	.52	.55
20 Ga...	.61	.64
1 1/4″ and 1 3/8″		
12 Ga...	$ .32	$ .35
13 Ga...	.32	.35

	Flat Hd. Nails	Brads
1 1/4″ and 1 3/8″ (Cont.)		
14 Ga...	$ .32	$ .35
15 Ga...	.33	.36
16 Ga...	.34	.37
17 Ga...	.36	.39
18 Ga...	.37	.40
1 1/2″ and 1 5/8″		
12 Ga...	$ .31	$ .34
13 Ga...	.31	.34
14 Ga...	.31	.34
15 Ga...	.33	.36
16 Ga...	.33	.36
17 Ga...	.35	.38
18 Ga...	.35	.38
1 3/4″		
12 Ga...	$ .30	$ .33
13 Ga...	.30	.33
14 Ga...	.30	.33
15 Ga...	.32	.35
16 Ga...	.32	.35
17 Ga...	.34	.37
2″		
12 Ga...	$ .30	$ .33
13 Ga...	.30	.33
14 Ga...	.30	.33
15 Ga...	.31	.34
16 Ga...	.31	.34
2 1/4″		
12 Ga...	$ .29	$ .32
13 Ga...	.30	.33
14 Ga...	.30	.33
2 1/2″ and 3″		
10 Ga...	$ .28	$ .31
11 Ga...	.28	.31
12 Ga...	.28	.31
13 Ga...	.29	.32

For intermediate gauge, use list price for same length in next finer gauge.
For intermediate length, use list price for same gauge in next shorter length.

Packing Extras to be Added to List Prices

*50 lb. Fibre Carton for shipping in bulk	$ .02 per lb.
50 lb. Wooden Box for shipping in bulk	.02 per lb.
*25 lb. Fibre Carton for shipping in bulk	.03 per lb.
25 lb. Wooden Box for shipping in bulk	.04 per lb.
*10 lb. Fibre Carton for shipping in bulk	.05 per lb.
10 lb. Wooden Box for shipping in bulk	.12 per lb.

* Will be furnished as standard practice unless otherwise specified.

(Packing extras continued on next page)

MISCELLANEOUS WIRE NAILS AND WIRE BRADS

List Prices — Effective February 5, 1940

(Packing extras continued from preceding page)

* 5 lb. Fibre Carton for shipping in bulk	$ .05 per lb.
5 lb. Wooden Box for shipping in bulk	.22 per lb.
* 5 lb. Papers—10 papers per shipping container	.06 per lb.
* 1 lb. Papers—50 papers per shipping container	.12 per lb.
1 lb. Papers—25 papers per shipping container	.12 per lb.
1 lb. Papers— 5 papers per carton, 10 cartons per shipping container	.13 per lb.
*½ lb. Papers—100 papers per shipping container	.15 per lb.
½ lb. Papers— 12 papers per carton, 12 cartons per shipping container	.18 per lb.
½ lb. Papers— 12 papers per carton, 9 cartons per shipping container	.18 per lb.
½ lb. Papers— 12 papers per carton, 6 cartons per shipping container	.18 per lb.
*¼ lb. Papers— 12 papers per carton, 25 cartons per shipping container	.28 per lb.
¼ lb. Papers— 12 papers per carton, 18 cartons per shipping container	.28 per lb.

* Will be furnished as standard practice unless otherwise specified.

Above represent shipping units, but if fewer papers than contained in a unit are wanted, they can be furnished in the number required, at same extra as for standard packing, but will be packed in shipping container to suit mill's convenience.

Extras for Special Features to be Added to List Prices

	Per Lb.		Per Lb.
Cement Coating	$ .03	Checkered Head	No charge
Barbing	.03	Oval or Cone Head	$ .03
Annealing	.03	Special diameter flat heads	.03
Bluing	.03	Blunt Point	No charge
For stock stiffer than standard	.03	Duck Bill Point	Quoted on request

Deep countersunk flat heads (of Casing and Flooring Brad type) ..... Use list prices for Brads

Other types of flat countersunk heads ..... $ .03

Headless ..... Use list prices for Brads

Needle and Other Special Points and Pointless

To arrive at net list for special points combine following extras according to length and gauge, adding result to list for size:

Length	Per Lb.
3/16"	$ .26
1/4"	.13
3/8"	.06
1/2"	.02
5/8"	.02
Longer than 5/8"	.01

For intermediate length use extra for next shorter length.

Gauge	Per Lb.
10 to 17 gauge, incl.	$ .01
18 and 19 gauge	.02
20 gauge	.03
21 gauge	.05
22 gauge	.06
23 gauge	.07
24 gauge	.08
25 gauge	.11
26 gauge	.14

For split gauge use extra for next finer gauge.

(Continued on next page)

MISCELLANEOUS WIRE NAILS AND WIRE BRADS

List Prices — Effective February 5, 1940

(Continued from preceding page)

Miscellaneous Wire Nails and Brads Tinned, Galvanized, Coppered, Brass and Cadmium Plated, Blued, Cement Coated and Annealed

On items of less than 100 lbs. the following **net** extras will be charged in addition to regular extras for galvanizing, tinning, etc. These are in addition to quantity extras charged for non-stock sizes.

10 to 24 lbs., incl.	$1.50 per item net
25 to 49 lbs., incl.	1.25 per item net
50 to 74 lbs., incl.	1.00 per item net
75 to 99 lbs., incl.	.75 per item net

Items for less than 10 lbs. will not be accepted.

Stock Items of Bright Miscellaneous Wire Nails and Brads Regularly Furnished in any Quantity — Kegs, Wood or Fibre Boxes and Papers

Bright — Flat Head — Smooth Wire Nails — Diamond Point

½″ x 20	⅝″ x 17	⅝″ x 15	⅝″ x 13
⅝″ x 20	¾″ x 17	¾″ x 15	¾″ x 13
	⅞″ x 17	⅞″ x 15	⅞″ x 13
	1″ x 17	1″ x 15	1″ x 13
½″ x 19	1¼″ x 17	1¼″ x 15	1¼″ x 13
⅝″ x 19		1½″ x 15	1½″ x 13
¾″ x 19	½″ x 16		1¾″ x 13
	⅝″ x 16		2″ x 13
	¾″ x 16		2½″ x 13
½″ x 18	⅞″ x 16	¾″ x 14	
⅝″ x 18	1″ x 16	⅞″ x 14	
¾″ x 18	1⅛″ x 16	1″ x 14	
⅞″ x 18	1¼″ x 16	1¼″ x 14	1″ x 12
1″ x 18	1½″ x 16	1½″ x 14	1½″ x 12

Bright — Flat Head — Smooth Wire Nails — Needle Point

⅜″ x 18	⅝″ x 17
½″ x 18	¾″ x 17
⅝″ x 18	⅞″ x 17
¾″ x 18	1″ x 17
⅞″ x 18	
1″ x 18	⅝″ x 16
1¼″ x 18	¾″ x 16
	⅞″ x 16
	1″ x 16
	¾″ x 13

Shade Nails — Needle Point — Flat Head — Slightly Ctsk.

¾″ x 13

¾″ x 14

(Stock sizes continued on next page)

MISCELLANEOUS WIRE NAILS AND WIRE BRADS

Effective February 5, 1940

(Stock sizes continued from preceding page)

Bright Wire Brads — Diamond Point

½″ x 22	½″ x 18	5/16″ x 16	1″ x 14
½″ x 21	5/8″ x 18	¾″ x 16	1¼″ x 14
	¾″ x 18	7/8″ x 16	1½″ x 14
⅜″ x 20	7/8″ x 18	1″ x 16	1¾″ x 14
½″ x 20	1″ x 18	1¼″ x 16	2″ x 14
5/8″ x 20	1¼″ x 18	1½″ x 16	2¼″ x 14
¾″ x 20	1½″ x 18	1¾″ x 16	2″ x 13
	5/8″ x 17	2″ x 16	2¼″ x 13
½″ x 19	¾″ x 17	1″ x 15	2½″ x 13
5/8″ x 19	7/8″ x 17	1¼″ x 15	2″ x 12
¾″ x 19	1″ x 17	1½″ x 15	2½″ x 12
7/8″ x 19	1¼″ x 17	1¾″ x 15	3″ x 12
1″ x 19	1½″ x 17	2″ x 15	2½″ x 10

Bright Wire Brads — Needle Point

½″ x 20	5/8″ x 18	¾″ x 17	¾″ x 16
5/8″ x 19	¾″ x 18	1″ x 17	1″ x 16
	1″ x 18	1¼″ x 17	1¼″ x 16

Net Quantity Extras on Non-Stock Items — Effective Feb. 5, 1940

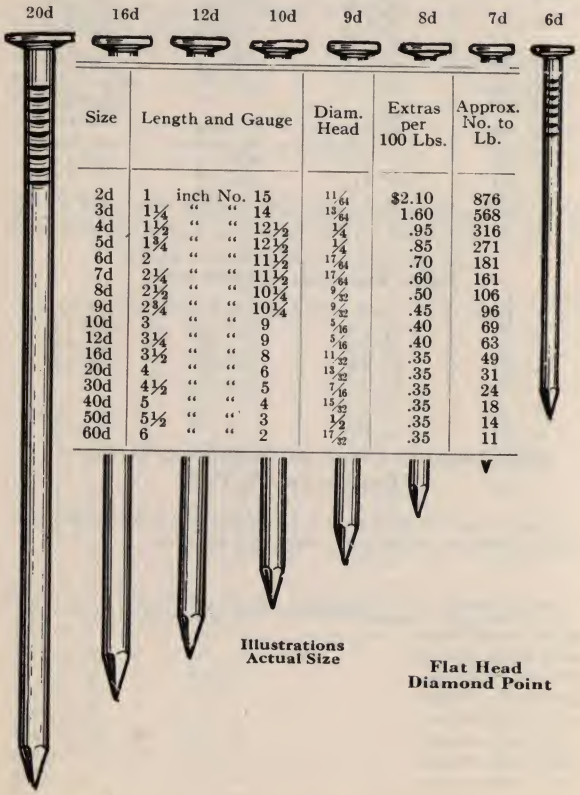
Any nail or brad not shown above as a stock item must be made according to order and is therefore subject to the following quantity extras:

Per 100 Lbs. net	
500 lbs. or more of a size	No extra
300 to 499 lbs. of a size	$ .15
200 to 299 lbs. of a size	.65
100 to 199 lbs. of a size	1.00
75 to 99 lbs. of a size	2.00
50 to 74 lbs. of a size	3.00
25 to 49 lbs. of a size	7.50
10 to 24 lbs. of a size	20.00

Items for less than 10 lbs. of a non-stock size will not be accepted.

Common Nails





Size	Length and Gauge	Diam. Head	Extras per 100 Lbs.	Approx. No. to Lb.
2d	1 inch No. 15	11/64	$2.10	876
3d	1¼ " " 14	13/64	1.60	568
4d	1½ " " 12½	1/4	.95	316
5d	1¾ " " 12½	1/4	.85	271
6d	2 " " 11½	17/64	.70	181
7d	2¼ " " 11½	17/64	.60	161
8d	2½ " " 10¼	9/32	.50	106
9d	2¾ " " 10¼	9/32	.45	96
10d	3 " " 9	5/16	.40	69
12d	3¼ " " 9	5/16	.40	63
16d	3½ " " 8	11/32	.35	49
20d	4 " " 6	13/32	.35	31
30d	4½ " " 5	7/16	.35	24
40d	5 " " 4	15/32	.35	18
50d	5½ " " 3	1/2	.35	14
60d	6 " " 2	17/32	.35	11

Illustrations Actual Size

Flat Head Diamond Point

Sterilized Blued Lath Nails





Illustrations Actual Size

Flat Head, Diamond Point

Size	Length and Gauge	Diam. Head	Extras per 100 Lbs.	Approx. No. to Lb.
2d	1 inch No. 16½	9/64	$3.10	1351
2d Light	1 " " 17	1/8	3.45	1560
3d	1¼ " " 15	11/64	2.45	778
3d Light	1⅛ " " 16	5/32	2.75	1015

Lathers carry the nails in the mouth while at work and it is therefore, from the standpoint of health sanitation, necessary to have the nails free from all injurious substances. Polished or bright nails cannot be made or kept entirely clean owing to process of manufacture as well as the effect of atmospheric conditions. Packed in paper-lined kegs.

Fine Nails Bright

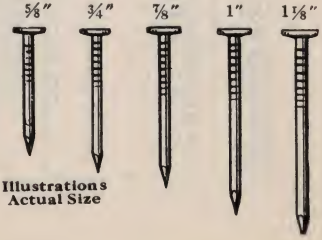
Size	Length and Gauge	Diam. Head	Extras per 100 Lbs.	Approx. No. to Lb.
2d	1 inch No. 16½	9/64	$2.75	1351
2d Ex. Fine	1 " " 17	1/8	3.10	1560
3d	1¼ " " 15	11/64	2.10	778
3d Ex. Fine	1⅛ " " 16	5/32	2.40	1015

Barrel Nails

Flat Head—Diamond Point

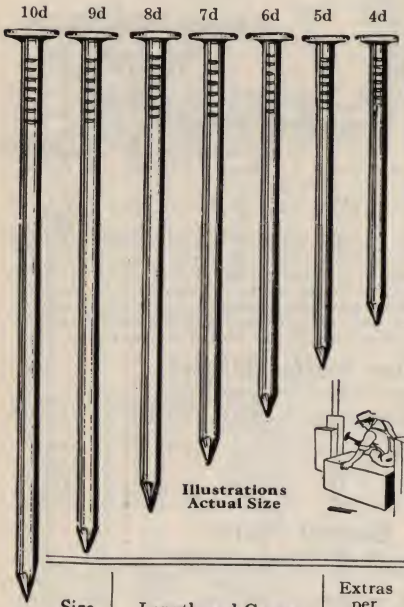
Size	Length and Gauge	Extras per 100 Lbs.	Diam. Head	Approx. No. to Lb.
⅝ inch	⅝ inch No. 15½	$3.05	9 Ga.	1615
¾ "	¾ " " 15½	2.75	9 "	1346
⅞ "	⅞ " " 14½	2.15	7 "	906
1 "	1 " " 14½	2.00	7 "	775
1⅛ "	1⅛ " " 14½	1.90	7 "	700
1¼ "	1¼ " " 14	1.75	6 "	568
1⅜ "	1⅜ " " 13	1.40	5 "	400
1½ "	1½ " " 13	1.20	5 "	367





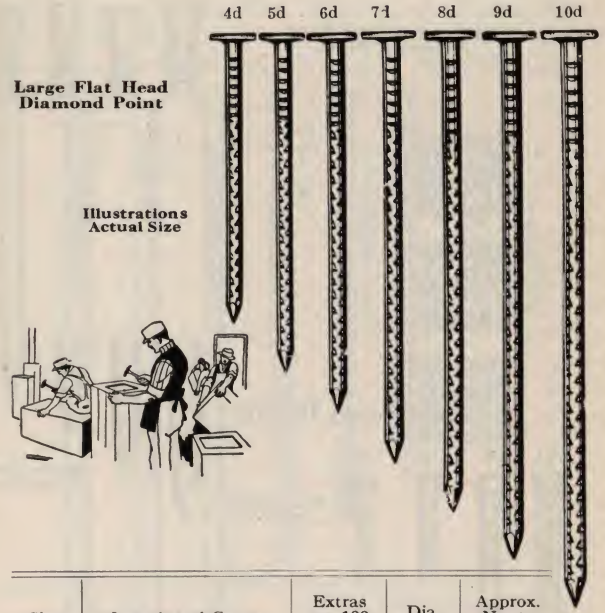
Illustrations Actual Size

Smooth Box Nails



Size	Length and Gauge	Extras per 100 Lbs.	Dia. Head	Approx. No. to Lb.
2d	1 inch No. 15½	$2.15	3/16	1010
3d	1¼ " " 14½	1.80	7/32	635
4d	1½ " " 14	1.25	7/32	473
5d	1¾ " " 14	1.15	7/32	406
6d	2 " " 12½	.95	17/64	236
7d	2¼ " " 12½	.85	17/64	210
8d	2½ " " 11½	.70	19/64	145
9d	2¾ " " 11½	.65	19/64	132
10d	3 " " 10½	.60	5/16	94
12d	3¼ " " 10½	.60	5/16	88
16d	3½ " " 10	.60	11/32	71
20d	4 " " 9	.45	3/8	52
30d	4½ " " 9	.40	3/8	46
40d	5 " " 8	.40	13/32	35

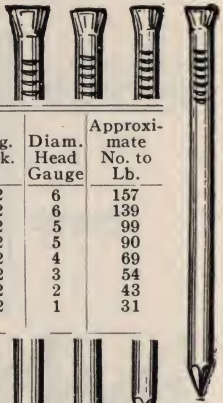
Barbed Box Nails



Size	Length and Gauge	Extras per 100 Lbs.	Dia. Head	Approx. No. to Lb.
2d	1 inch No. 15½	$2.15	3/16	1010
3d	1¼ " " 14½	1.85	7/32	635
4d	1½ " " 14	1.30	7/32	473
5d	1¾ " " 14	1.20	7/32	406
6d	2 " " 12½	1.00	17/64	236
7d	2¼ " " 12½	.90	17/64	210
8d	2½ " " 11½	.75	19/64	145
9d	2¾ " " 11½	.70	19/64	132
10d	3 " " 10½	.65	5/16	94
12d	3¼ " " 10½	.65	5/16	88
16d	3½ " " 10	.65	11/32	71
20d	4 " " 9	.50	3/8	52
30d	4½ " " 9	.45	3/8	46
40d	5 " " 8	.45	13/32	35

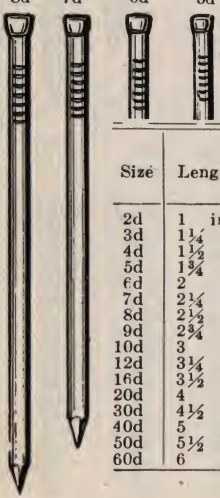
Flooring Brads

Deep Countersunk Head Diamond Point



Size	Length and Gauge	Extras per 100 Lbs.	Deg. Ctsk.	Diam. Head Gauge	Approximate No. to Lb.
6d	2 inch No. 11	$0.75	32	6	157
7d	2¼ " " 11	.65	32	6	139
8d	2½ " " 10	.55	32	5	99
9d	2¾ " " 10	.50	32	5	90
10d	3 " " 9	.45	32	4	69
12d	3¼ " " 8	.45	32	3	54
16d	3½ " " 7	.40	32	2	43
20d	4 " " 6	.30	32	1	31
	2½ " " 11	.60			

Common Brads



Brad Head Diamond Point

Illustrations Actual Size

Size	Length of Gauge	Extras per 100 Lbs.	Diam. Head. Gauge	Approx. No. to Lb.
2d	1 inch No. 15	$2.15	12	876
3d	1¼ " " 14	1.65	11	568
4d	1½ " " 12½	1.00	9½	316
5d	1¾ " " 12½	.90	9½	271
6d	2 " " 11½	.75	8½	181
7d	2¼ " " 11½	.65	8½	161
8d	2½ " " 10¼	.55	7	106
9d	2¾ " " 10¼	.50	7	96
10d	3 " " 9	.45	6	69
12d	3¼ " " 9	.45	6	64
16d	3½ " " 8	.40	5	49
20d	4 " " 6	.40	3	31
30d	4½ " " 5	.40	2	24
40d	5 " " 4	.40	1	18
50d	5½ " " 3	.40	0	16
60d	6 " " 2	.40	00	11

Kuphed Flooring Nails and Common Brads furnished on request, at no extra charge.

American Ideal Flooring Brads

These brads with their scientifically designed points and slim shanks save time and money on hard wood flooring jobs. Points are so designed as to cut clean and true without splitting the flooring. Special stiff wire is used to resist bending.



100 lbs. net per keg.

For cement coated nails add 15 cents per 100 lbs. to extras in table.

Size	Length	Gauge	Diameter Head	Count per Pound	Extras per 100 Lbs.
3d	1¼″	14½	11½ Ga.	627	$2.05
4d	1½″	14	11 "	459	1.65
5d	1¾″	14	11 "	400	1.55
6d	2″	12½	9½ "	233	1.20
7d	2¼″	12	9 "	176	1.05
8d	2½″	11½	8½ "	137	.95
9d	2¾″	11	8 "	114	.90
10d	3″	10½	7½ "	92	.85
12d	3¼″	10	7 "	76	.85
16d	3½″	9	6 "	57	.80
20d	4″	8	5 "	42	.65

Casing Nails



Deep Countersunk Head, Diamond Point



Size	Length and Gauge	Extras per 100 Lbs.	Degree of Countersunk	Dia. Head Ga.	Apprx. No. to Lb.
2d	1 inch No. 15½	$2.20	32	12½	1010
3d	1¼ " " 14½	1.70	32	11½	635
4d	1½ " " 14	1.30	32	11	473
5d	1¾ " " 14	1.20	32	11	406
6d	2 " " 12½	.85	32	9½	236
7d	2¼ " " 12½	.75	32	9½	210
8d	2½ " " 11½	.60	32	8½	145
9d	2¾ " " 11½	.55	32	8½	132
10d	3 " " 10½	.50	32	7½	94
12d	3¼ " " 10½	.50	32	7½	87
16d	3½ " " 10	.50	32	7	71
20d	4 " " 9	.35	32	6	52
30d	4½ " " 9	.30	32	6	46
40d	5 " " 8	.30	32	5	35



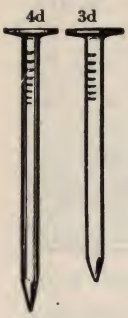
Illustrations Actual Size

Finishing Nails

Brad Head, Diamond Point

Size	Length and Gauge	Extras per 100 Lbs.	Dia. Head Ga.	Approx. No. to Lb.
2d	1 inch No. 16½	$2.65	13½	1351
3d	1¼ " " 15½	1.95	12½	807
4d	1½ " " 15	1.65	12	584
5d	1¾ " " 15	1.55	12	500
6d	2 " " 13	.95	10	309
7d	2¼ " " 13	.85	10	238
8d	2½ " " 12½	.65	9½	189
9d	2¾ " " 12½	.60	9½	172
10d	3 " " 11½	.55	8½	121
12d	3¼ " " 11½	.55	8½	113
16d	3½ " " 11	.55	8	90
20d	4 " " 10	.40	7	62

Kuphed style furnished on Casing and Finishing Nails unless otherwise specified.



Shingle Nails

Bright or Hot Galvanized-Zinc Coated

Size	Length and Gauge	Extras per 100 Lbs.	Diam. Head	Approx. No. to Lb. Bright
3d	1¼ inch No. 13	$1.35	¼	429
3½d	1⅜ " " 12½	1.20	9/32	345
4d	1½ " " 12	1.10	9/32	274
5d	1¾ " " 12	1.00	9/32	235
6d	2 " " 12	.95	9/32	204
Large Head Shingle Nails				
3d	1¼ inch No. 13	$1.70	5/16	
3½d	1⅜ " " 12½	1.35	5/16	
4d	1½ " " 12	1.25	5/16	

*3d Hot Galvanized-Zinc Coated COMMON NAILS are sometimes used for shingling. Be sure to specify which style is wanted.

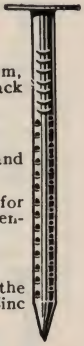
American Zinc Coated Asbestos

Barbed Shingle Nails

Hot Galvanized-Zinc Coated

Large Flat Head, Needle Point

A rust-resisting permanence in asbestos shingle roofing



HEAD—13/32 in. diameter Extra Large Flat Head—uniform, well centered, smooth underneath head—no fins to crack asbestos shingles or make nail hole larger.

POINT—Easy driving with sharp Needle Points.

BARBED—Shank of Nail barbed to insure good grip and holding power.

LENGTHS—1 inch to 2 inches inclusive—Short lengths for applying direct to roof decks. Longer lengths for fastening over old wooden shingles.

GAUGE—No. 11½. Just the proper thickness.

ZINC COATING—Hot Galvanized-Zinc Coated Nails—as the name implies, galvanized by the Hot Galvanized-Zinc Coat Process.

Length	Extras per 100 Lbs.—Bright		COUNT PER LB.	
	Barbed	Smooth	Bright	Galv.
1"	$1.85	$1.85	316	278
1⅛"	1.85	1.80	281	256
1¼"	1.70	1.65	261	238
1½"	1.65	1.60	219	197
1¾"	1.55	1.50	190	170
2"	1.50	1.45	170	148

American Red Cedar Shingle Nails

Hot Galvanized-Zinc Coated

These nails conform fully to the specifications of the Red Cedar Shingle Bureau as regards length, gauge, galvanizing, heads, and points. They are especially adapted to Red Cedar Shingles both for new and old roofs.

		Gauge	Head	Approx. Number per Lb.	Extras per 100 Lbs.
FOR NEW ROOFS					
16″ and 18″ Shingles	3d..1¼″	14½	7/32	600	$1.80
24″ Shingles.....	4d..1½″	14	7/32	450	1.25
OVER OLD ROOFS					
16″ and 18″ Shingles	5d..1¾″	14	7/32	406	1.15
24″ Shingles.....	6d..2″	13	7/32	200	1.05

Subject to extra for galvanizing.

Peerless Cut Shingle Nails

Made in sizes 2d, 2½d and 3d, Hot Galvanized-Zinc Coated. They embody all of the desirable features of the Wire Nail as well as those of the old style Cut Nail.

Recommended by the Red Cedar Shingle Bureau for applying Red Cedar Shingles.

Prices on application.

American Ideal Shingle Nail

Hot Galvanized-Zinc Coated

¼″ Large Flat Head, Blunt or Sharp Diamond Point



The American Shingle Nail offers many advantages. Its Special Blunt Diamond Point cuts cleanly through the wood without splitting. Made of hard and constantly uniform steel, it provides great resistance to bending, saves time and reduces labor. A heavy covering of hot zinc gives the most efficient protection against rust and corrosion.

These nails will positively not split the shingles.

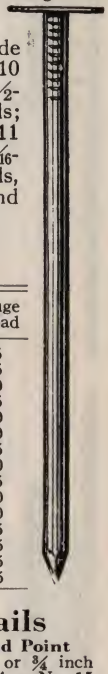
Size	Length	Gauge	Approx. Count Per Lb. Galv.	Extras per 100 Lbs. Bright
3d	1¼	14	466	$1.60
3½d	1⅜	14	436	1.50
4d	1½	13	313	1.05

Subject to Extra for Galvanizing.

Smooth Foundry Nails

Large Flat Head, Diamond Point





These nails are made of Nos. 8, 9, and 10 gauge wire, with ½-inch diameter heads; also made of No. 11 gauge wire, with 7/16-inch diameter heads, in lengths ¾ inch and longer.

Extras Per 100 Lbs.—in Kegs
Smooth Foundry Nails

	8 Gauge ½" Head	9 Gauge ½" Head	10 Gauge ½" Head	11 Gauge 7/16" Head
¾ inch.....	$1.55	$1.60	$1.70	$1.85
⅞ inch.....	1.45	1.50	1.60	1.75
1 inch.....	1.40	1.40	1.55	1.70
1⅛ inch.....	1.35	1.35	1.45	1.65
1¼ inch.....	1.20	1.20	1.30	1.50
1½ inch.....	1.15	1.15	1.25	1.40
1¾ inch.....	1.10	1.10	1.20	1.35
2 inch.....	1.05	1.05	1.15	1.30
2¼ inch.....	1.00	1.00	1.10	1.25
2½ inch.....	.95	.95	1.05	1.20
2¾ inch.....	.95	.95	1.05	1.20
3 inch.....	1.10	1.10	1.20	1.35
4 inch.....	1.05	1.05	1.20	1.35
5 inch.....	1.20	1.20	1.30	1.45
6 inch.....	1.20	1.20	1.30	1.45



Flat Head Diamond Point

Illustrations Actual Size

Broom Nails

Flat Head Diamond Point

Are usually ⅝ inch or ¾ inch long, made from No. 14 or No. 15 gauge wire, with smooth flat or flat star heads, diamond point.

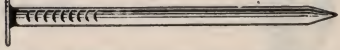
Extra Per 100 Lbs.

⅝ x 14...$2.25 ¾ x 14...$2.10
⅝ x 15... 2.70 ¾ x 15... 2.35

Size of Head: No. 15-11/64 Inch
No. 14-7/32 Inch

American Wood Shingle Nails

Hot Galvanized-Zinc Coated—5d, 1¾"; 13 ga., ¼" Head



Especially adapted for laying new wood shingles over old shingles or roofing. Just the proper thickness to prevent splitting of shingles and right length to insure good holding power without projecting through roofing boards. Hot Zinc Coated to give long life.

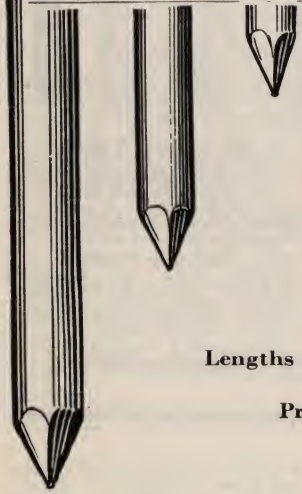
Advance per 100 lbs. $0.95, subject to extra for galvanizing.



Round Wire Spikes

Flat Head, Diamond Point

Size	Length and Gauge	Extras per 100 Lbs.	Degree of Countersunk	Diam. Head	Approx. No. to Pound
10d	3 inch No. 6				
12d	3¼ " " 6				
16d	3½ " " 5				
20d	4 " " 4	$0.35	123	15/32	23
30d	4½ " " 3	.35	123	½	17
40d	5 " " 2	.35	123	17/32	13
50d	5½ " " 1	.45	123	9/16	10
60d	6 " " 1	.45	123	9/16	9
7″	7 " 5/16 inch	.45	123	⅝	6
8″	8 " ⅜ "	.45	123	¾	4
9″	9 " ⅜ "	.60	123	¾	3½
10″	10 " ⅜ "	.60	123	¾	3
12″	12 " ⅜ "	.60	123	¾	2½

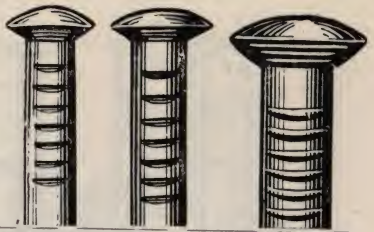




Lengths up to 16″ inc. supplied in various gauges.
Prices on Application

Round Wire Spikes

Countersunk Oval Head, Chisel Point



Size	Length and Gauge	Extras per 100 Lbs.	Degree of Countersunk	Head Rad.	Dia. Head	Approx. No. to Pound
10d	3 inch No. 6					
12d	3¼ " " 6					
16d	3½ " " 5					
20d	4 " " 4	$0.65	123	7/16	15/32	23
30d	4½ " " 3	.65	123	7/16	½	17
40d	5 " " 2	.65	123	7/16	17/32	13
50d	5½ " " 1	.75	123	7/16	9/16	10
60d	6 " " 1	.75	123	7/16	9/16	9
7″	7 " 5/16 inch	.75	123	5/8	5/8	6
8″	8 " 3/8 "	.75	123	3/4	3/4	4
9″	9 " 3/8 "	.90	123	3/4	3/4	3½
10″	10 " 3/8 "	.90	123	3/4	3/4	3
12″	12 " 3/8 "	.90	123	3/4	3/4	2½



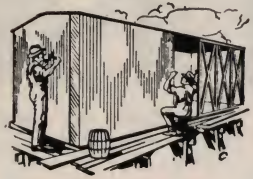




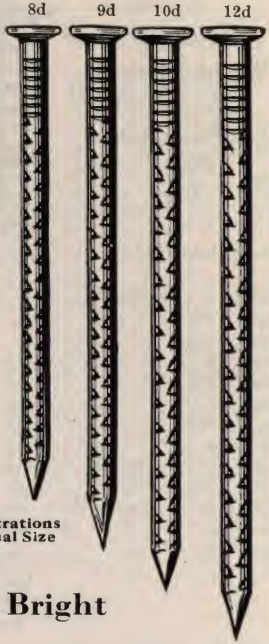
Lengths up to 16″ inc. supplied in various gauges.
Prices on Application

Barbed Car Nails

Flat Head, Slightly Countersunk Diamond Point



In ordering Car Nails be sure to specify whether Light or Heavy, Annealed or Bright, Oval or Flat Head.



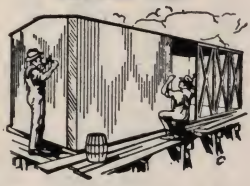
Illustrations Actual Size

Light, Bright

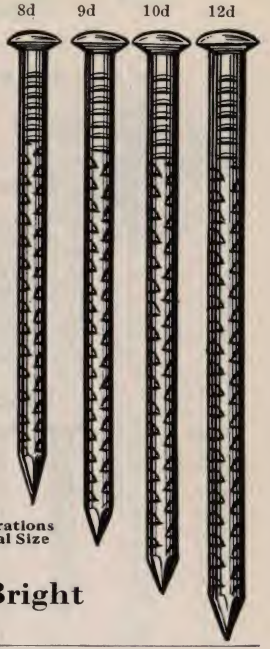
Size	Length and Gauge	Extras per 100 Lbs.		Diam. Head	Approx. No. to Lb.
		Oval Ctsk. Head	Flat Ctsk. Head		
4d	1½ inch No. 12	$1.15	$1.05	¼	274
5d	1¾ " " 10	.90	.80	9/32	142
6d	2 " " 10	.85	.75	9/32	124
7d	2¼ " " 9	.70	.60	5/16	92
8d	2½ " " 9	.65	.55	5/16	82
9d	2¾ " " 8	.60	.50	11/32	62
10d	3 " " 8	.60	.50	11/32	57
12d	3¼ " " 7	.60	.50	3/8	50
16d	3½ " " 7	.55	.45	3/8	43
20d	4 " " 6	.55	.45	13/32	31
30d	4½ " " 6	.55	.45	13/32	28
40d	5 " " 5	.55	.45	7/16	21
50d	5½ " " 4	.55	.45	15/32	17
60d	6 " " 4	.55	.45	15/32	15

Barbed Car Nails

Oval Head, Slightly Countersunk Diamond Point



In ordering Car Nails be sure to specify whether Light or Heavy, Annealed or Bright, Oval or Flat Head.



Illustrations Actual Size

Heavy, Bright

Size	Length and Gauge	Extras per 100 Lbs.		Diam. Head	Approx. No. to Lb.
		Oval Ctsk. Head	Flat Ctsk. Head		
4d	1½ inch No. 10	$1.00	$0.90	9/32	165
5d	1¾ " " 9	.85	.75	5/16	118
6d	2 " " 9	.80	.70	5/16	103
7d	2¼ " " 8	.70	.60	11/32	76
8d	2½ " " 8	.65	.55	11/32	69
9d	2¾ " " 7	.60	.50	3/8	54
10d	3 " " 7	.60	.50	3/8	50
12d	3¼ " " 6	.55	.45	13/32	42
16d	3½ " " 6	.55	.45	13/32	35
20d	4 " " 5	.55	.45	7/16	26
30d	4½ " " 5	.55	.45	7/16	24
40d	5 " " 4	.55	.45	15/32	18
50d	5½ " " 3	.55	.45	1/2	15
60d	6 " " 3	.55	.45	1/2	13

Clout Nails

Flat Head Duck Bill Point

Length Inches	Gauge No.	Extras Per 100 Lbs.		Diam. Head Gauge	Approx. No. to Lb.
		Annealed	Bright		
3/4	15	$3.60	$3.35	4	1038
7/8	14	3.00	2.75	3	808
1	14	2.85	2.60	3	710
1 1/8	14	2.75	2.50	3	610
1 1/4	13	2.35	2.10	2	423
1 3/8	13	2.15	1.90	2	390
1 1/2	13	2.05	1.80	2	350

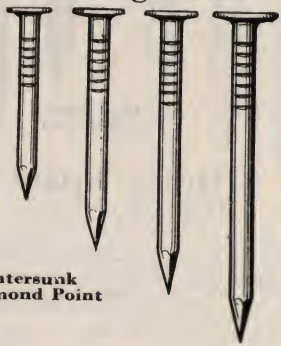


Side view showing thickness of point

Side view showing width of point

Illustrations Actual Size

Slating Nails

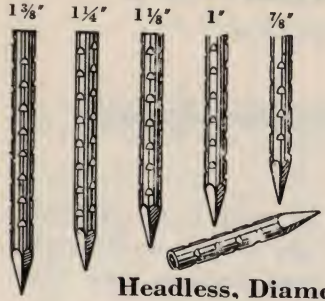


Slightly Countersunk Flat Head, Diamond Point

Illustrations Actual Size

Size	Length and Gauge	Extras Per 100 Lbs.	Deg. of Countersunk	Diam. Head	Approx. No. to Lb. Bright
2d	1 inch No. 12	$1.60	145	5/16	411
3d	1 1/4 " " 10 1/2	1.20	145	3/8	225
4d	1 1/2 " " 10 1/2	.95	145	3/8	187
5d	1 3/4 " " 10	.85	145	13/32	142
6d	2 " " 9	.75	145	7/16	103

Kuphed Barbed Dowel Pins





Headless, Diamond Points

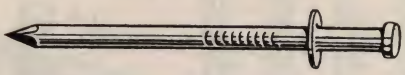
Size	Extras per 100 Lbs.				
	No. 8	No. 9	No. 10	No. 11	No. 12
⅝ inch	$1.90	$2.10	$2.25	$2.45	$2.60
¾ "	1.80	1.90	2.05	2.20	2.45
⅞ "	1.70	1.80	1.95	2.10	2.30
1 "	1.55	1.70	1.85	1.90	2.05
1⅛ "	1.45	1.60	1.75	1.80	1.95
1¼ "	1.35	1.45	1.65	1.70	1.75
1⅜ "	1.25	1.35	1.55	1.60	1.65
1½ "	1.15	1.25	1.40	1.50	1.55
1⅝ "	1.15	1.25	1.40	1.50	1.55
1¾ "	1.05	1.15	1.30	1.35	1.45
2 "	1.00	1.10	1.25	1.30	1.40

Size	Approx. No. to Lb.				
	No. 8	No. 9	No. 10	No. 11	No. 12
⅝ inch	290	404	486	588	804
¾ "	250	336	390	480	616
⅞ "	210	281	330	400	544
1 "	190	235	277	349	484
1⅛ "	165	212	251	305	420
1¼ "	150	187	221	267	352
1⅜ "	130	169	200	239	324
1½ "	120	154	181	221	308
1⅝ "	110	141	167	208	275
1¾ "	100	130	154	195	256
2 "	90	111	131	164	210

Kuphed dowel pins will be furnished unless plain head is specified.

Duplex Head Nails

Diamond Point



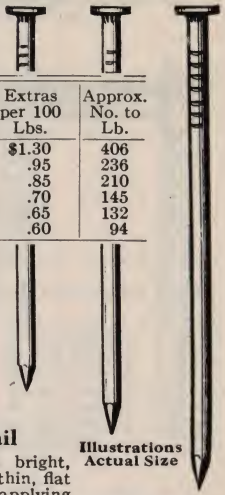
Especially designed for use on Concrete Forms, Scaffolds and other types of temporary wooden construction. Extra head permits easy withdrawal of nail without damage to lumber.

Bright

Size	Length Under Lower Head	Gauge	Distance Between Heads	Extras per 100 lbs.
1¾″	1¾″	11½	¼″	$4.50
2¼″	2¼″	10¼	¼″	3.50
2¾″	2¾″	9	5/16″	3.00
3″	3″	8	⅜″	2.60
3½″	3½″	6	⅜″	2.40
4″	4″	5	7/16″	2.20

Siding Nails

Flat Head—Diamond Point



Size	Length and Gauge	Diam. Head	Extras per 100 Lbs.	Approx. No. to Lb.
5d	1¾ inch No. 14	5/32	$1.30	406
6d	2 " " 12½	3/16	.95	236
7d	2¼ " " 12½	3/16	.85	210
8d	2½ " " 11½	7/32	.70	145
9d	2¾ " " 11½	7/32	.65	132
10d	3 " " 10½	¼	.60	94

Illustrations Actual Size

10d

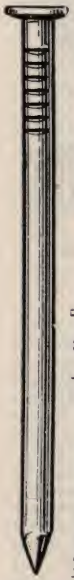
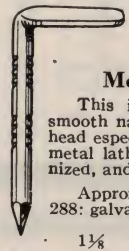


Illustration Actual Size



Hook Head Metal Lath Nail

This is a 1⅛ x 12 bright, smooth nail with a long thin, flat head especially suited for applying metal lath. Can also be furnished blued, galvanized, and in other lengths.

Approximate count per pound, blued or bright, 288: galvanized, 268.

Extra, over base per 100 lbs.— Bright

1⅛ No. 12 ..... $2.50

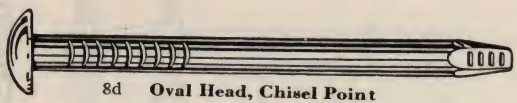
Illustration Actual Size

Fence Nails

Size	Length and Gauge	Extras per 100 Lbs.	Diam. Head	Approx. No. to Lb.
5d	1¾ inch No. 10	$0.70	9/32	142
6d	2 " " 10	.65	9/32	124
7d	2¼ " " 9	.50	5/16	92
8d	2½ " " 9	.45	5/16	82
9d	2¾ " " 8	.40	11/32	62
10d	3 " " 7	.40	3/8	50
12d	3¼ " " 6	.35	13/32	40
16d	3½ " " 5	.35	7/16	30
20d	4 " " 4	.35	15/32	23

Hinge Nails

In ordering specify whether Oval or Countersunk Head, Light or Heavy, Annealed or Bright

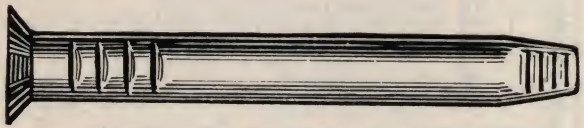


8d **Oval Head, Chisel Point**

Light Hinge Nails

Bright

Size	Length and Gauge	Extras per 100 Lbs.		Dia. Head	Approx. No. to Lb.
		Oval	Flat Ctsk.		
4d	1½ inch No. 3/16	$1.05	$0.95	13/32	82
6d	2 inch No. 3/16	.90	.80	13/32	62
8d	2½ inch No. 3/16	.75	.65	13/32	50
10d	3 inch No. 1/4	.75	.65	1/2	25
12d	3¼ inch No. 1/4	.75	.65	1/2	23
16d	3½ inch No. 1/4	.75	.65	1/2	22
20d	4 inch No. 1/4	.65	.55	1/2	19



10d (heavy) **Flat Countersunk Head, Chisel Point**

Heavy Hinge Nails

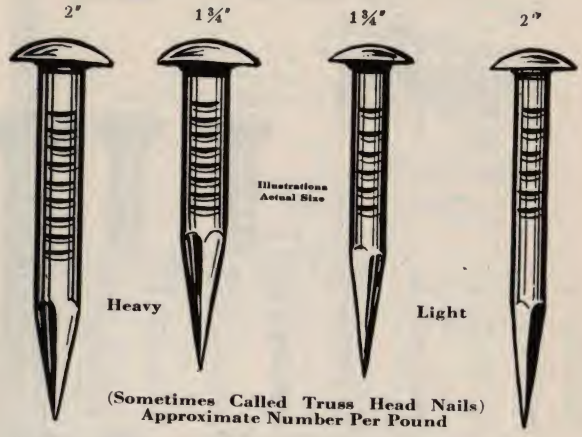
Bright

Size	Length and Gauge	Extras per 100 Lbs.		Dia. Head	Approx. No. to Lb.
		Oval	Flat Ctsk.		
4d	1½ inch No. 1/4	$1.15	$1.05	1/2	50
6d	2 inch No. 1/4	.95	.85	1/2	38
8d	2½ inch No. 1/4	.80	.70	1/2	30
10d	3 inch 3/8 inch	.85	.75	3/4	12
12d	3¼ inch 3/8 inch	.85	.75	3/4	11
16d	3½ inch 3/8 inch	.85	.75	3/4	10
20d	4 inch 3/8 inch	.75	.65	3/4	9

Annealed nails 25c per 100 pounds advance.

Large Oval Head Long Diamond Point Hinge Nails

Sold at special net prices on application.



(Sometimes Called Truss Head Nails)
Approximate Number Per Pound

Length	3/16-inch	¼-inch
1½ inch	81	47
1¾ "	68	41
2 "	61	33
2¼ "	54	31
2½ "	48	28
2¾ "	45	26
3 "	41	24

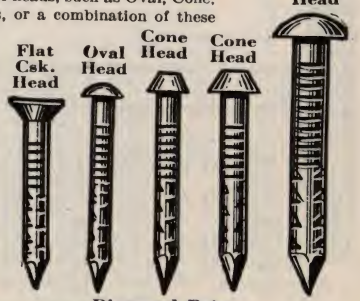
3/16 inch and ¼ inch by 1 ½ inch, 1 ¾ inch, 2 inch, 2 ½ inch, 2 ¾ inch and 3 inch.

Packed in Kegs, and 50, 25, 10 and 5 Pound Boxes.

Annealed Wagon Nails

Made with different styles of heads, such as Oval, Cone, Countersunk or Steeple heads, or a combination of these styles if desired. Well barbed and thoroughly annealed, with heads perfectly uniform, these wagon nails are especially adapted for blacksmiths' use.

PRICES on these nails are the same as for miscellaneous nails, plus extras for special features, such as for heads, barbing and annealing, as shown in Miscellaneous Nail List. When ordering specify style, point, finish and all features.



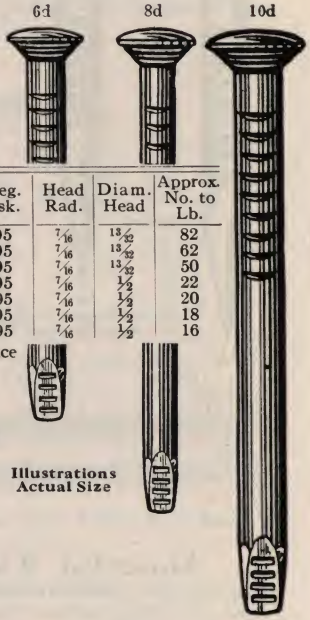
Boat Nails

Oval Countersunk Head, Chisel Point



Light Boat Nails

Bright

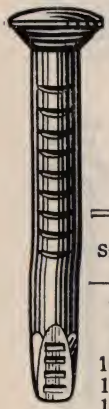


Size	Length and Gauge	Extras per 100 Lbs.	Deg. Csk.	Head Rad.	Diam. Head	Approx. No. to Lb.
4d	1½ inch No. 3/16	$1.05	95	7/16	13/32	82
6d	2 " " 3/16	.90	95	7/16	13/32	62
8d	2½ " " 3/16	.75	95	7/16	13/32	50
10d	3 " " 1/4	.75	95	7/16	1/2	22
12d	3¼ " " 1/4	.75	95	7/16	1/2	20
16d	3½ " " 1/4	.75	95	7/16	1/2	18
20d	4 " " 1/4	.65	95	7/16	1/2	16

Annealed nails 25c per 100 pounds advance

Heavy Boat Nails

Bright



Illustrations Actual Size

Size	Length and Gauge	Extras per 100 Lbs.	Deg. Csk.	Head Rad.	Dia. Head	Approx. No. to Lb.
4d	1½ inch No. 1/4	$1.15	95	7/16	1/2	44
6d	2 " " 1/4	.95	95	7/16	1/2	32
8d	2½ " " 1/4	.80	95	7/16	1/2	26
10d	3 " " 3/8	.85	95	7/16	3/4	14
12d	3¼ " " 3/8	.85	95	7/16	3/4	13
16d	3½ " " 3/8	.85	95	7/16	3/4	12
20d	4 " " 3/8	.75	95	7/16	3/4	10

Annealed nails 25c per 100 pounds advance.

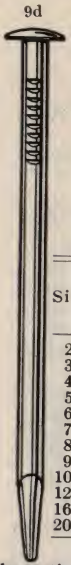


Illustration
Actual Size

Clinch Nails

Oval Head, Duck Bill Points, Bright or Annealed

Bright Clinch Nails Will Be Furnished Unless Otherwise Ordered

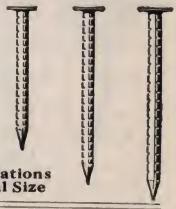


Size	Length and Gauge	Extras per 100 Lbs.		Head Rad.	Dia. Head	Approx. No. to Lb.
		Bright	Annealed			
2d	1 inch No. 14	$2.75	$3.00	1/4	3/16	710
3d	1 1/4 " " 13	2.25	2.50	1/4	7/32	429
4d	1 1/2 " " 12	1.60	1.85	1/4	7/32	274
5d	1 3/4 " " 12	1.50	1.75	1/4	1/4	235
6d	2 " " 11	1.35	1.60	5/16	17/64	157
7d	2 1/4 " " 11	1.25	1.50	5/16	17/64	139
8d	2 1/2 " " 10	.90	1.15	5/16	9/32	99
9d	2 3/4 " " 10	.85	1.10	5/16	9/32	90
10d	3 " " 9	.70	.95	5/16	5/16	69
12d	3 1/4 " " 9	.70	.95	5/16	5/16	62
16d	3 1/2 " " 8	.65	.90	3/8	11/32	49
20d	4 " " 7	.55	.80	3/8	3/8	37

Berry Box Nails

Diamond or Needle Point, Smooth or Barbed Flat Head.





Illustrations Actual Size

Size	Length and Gauge	Extras per 100 Lbs.		Diam. Head	Approx. No. to Lb.
		Smooth	Barbed		
	No. 16				
3/4 inch	3/4 inch	$3.05	$3.05	9 Ga.	1500
7/8 "	7/8 "	2.85	2.85	"	1300
1 "	1 "	2.50	2.50	"	1150
1 1/8 "	1 1/8 "	2.40	2.45	"	1010
1 1/4 "	1 1/4 "	2.25	2.30	"	910
	No. 17				
3/4 inch	3/4 inch	$3.55	$3.55	9 Ga.	1904
7/8 "	7/8 "	3.05	3.05	"	1584
1 "	1 "	2.95	2.95	"	1432
1 1/8 "	1 1/8 "	2.75	2.80	"	1300
1 1/4 "	1 1/4 "	2.40	2.45	"	1168

Needle Point Nails, 15c per 100 lbs. extra.

American Special Blued Plaster Board Nails

Large and Extra Large Flat Heads



Long Diamond Point

Blued and sterilized for sanitary protection. Can be fed from the mouth without fear of infection. Packed in paper lined kegs for protection against dust and foreign material until used.

Length	Gauge	Head Diameter	Approx. No. per Lb.	Extra per 100 Lbs.
1″	13	5/16″	469	$2.35
1 1/8″	13	5/16″	448	2.30
1 1/4″	13	5/16″	387	2.05
1 1/2″	13	5/16″	339	2.00
1 3/4″	13	5/16″	291	1.95
1″	13	3/8″	438	4.50
*1 1/8″	13	3/8″	419	4.40
1 1/4″	13	3/8″	367	4.30
1 1/2″	13	3/8″	319	4.15
1 3/4″	13	3/8″	271	4.05

Above extras include all features.

*** 1 1/8″ x 13 gauge nails with 3/8″ head recommended by Gypsum Association for applying gypsum lath.**

Gypsum Wallboard Nails

Regular Flat Head — **Recommended by Gypsum Assoc. for applying Gypsum Wallboard.** — **Diamond Point**

Cement Coated

Type	Length	Gauge	Head Diameter	Approx. No. per Lb.	Extra per 100 Lbs.
4d Cooler	1 3/8″	14	7/32″	488	$1.50
5d "	1 5/8″	13 1/2	15/64″	364	1.20

For other Cement Coated Nails refer to pages 59 to 65 incl.

Cork Insulation Nails

Hot Galvanized-Zinc Coated

These nails are especially adapted for fastening cork and similar insulations, especially in large built-in refrigerator rooms.

They are usually ordered in lengths from 3 to 10 inches and regularly No. 9 gauge. Heads 17/32″ diameter, regular diamond points. Other gauges can be supplied.

Subject to extra for galvanizing.

Large Head Roofing Nails

Diamond Points, Bright or Hot Galvanized



Extras Per 100 Lbs.

	No. 10 ½" Head		No. 10 7/16" Head		No. 10½ 7/16" Head		No. 11 7/16" Head		No. 12 3/8" Head	
	Barbed	Smooth	Barbed	Smooth	Barbed	Smooth	Barbed	Smooth	Barbed	Smooth
¾"	$1.70	$1.70	$1.65	$1.65	$1.75	$1.75	$1.85	$1.85	$2.05	$2.05
⅞"	1.60	1.60	1.55	1.55	1.65	1.65	1.75	1.75	1.95	1.95
1"	1.55	1.55	1.50	1.50	1.60	1.60	1.70	1.70	1.80	1.80
1⅛"	1.50	1.45	1.50	1.45	1.60	1.55	1.70	1.65	1.80	1.75
1¼"	1.35	1.30	1.30	1.25	1.45	1.40	1.55	1.50	1.65	1.60
1½"	1.30	1.25	1.25	1.20	1.35	1.30	1.45	1.40	1.60	1.55
1¾"	1.25	1.20	1.20	1.15	1.30	1.25	1.40	1.35	1.55	1.50
2"	1.20	1.15	1.15	1.10	1.25	1.20	1.35	1.30	1.45	1 40

Subject to charge for galvanizing.

Ideal Roofing Nails

For All Kinds of Smooth, Asbestos and Grit Surfaced Roofing and Shingles

This Ideal Roofing Nail is the result of a close study of trade requirements over a long period of years. Heads are large and checkered, uniform and well centered. The shank is built right—not too thick to split the wood nor too thin to break, bend or rust out quickly. The sharp points enable the roofer to do his work better and easier in considerably less time.

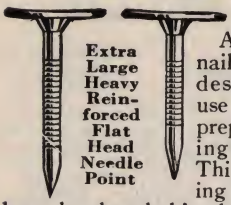


Extras Per 100 Lbs.
Bright

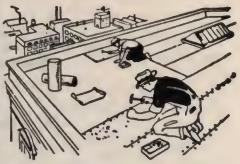
	No. 10 5/8" Head		No. 10½ 9/16" Head		No. 11 9/16" Head		No. 11 ½" Head		No. 12 ½" Head		No. 12 7/16" Head	
	Barbed	Smooth	Barbed	Smooth	Barbed	Smooth	Barbed	Smooth	Barbed	Smooth	Barbed	Smooth
¾"	2.55	2.55	2.75	2.75	3.15	3.15	3.00	3.00	3.55	3.55	3.40	3.40
⅞"	2.25	2.25	2.45	2.45	2.85	2.85	2.70	2.70	3.25	3.25	3.10	3.10
1"	2.00	2.00	2.20	2.20	2.65	2.65	2.50	2.50	3.05	3.05	2.90	2.90
1⅛"	1.95	1.90	2.15	2.10	2.55	2.50	2.40	2.35	3.00	2.95	2.85	2.80
1¼"	1.85	1.80	2.05	2.00	2.45	2.40	2.30	2.25	2.90	2.85	2.75	2.70
1½"	1.75	1.70	1.95	1.90	2.35	2.30	2.20	2.15	2.80	2.75	2.65	2.60
1¾"	1.65	1.60	1.85	1.80	2.25	2.20	2.10	2.05	2.65	2.60	2.50	2.45
2"	1.60	1.55	1.80	1.75	2.20	2.15	2.05	2.00	2.60	2.55	2.45	2.40

Smooth head Ideal nails can be furnished at no extra charge.
Subject to charge for galvanizing.

American Felt Roofing Nails



Extra Large Heavy Reinforced Flat Head Needle Point



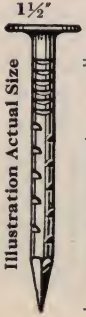
A large head nail especially designed for use in laying prepared roofing material. This nail, having an extra large head and thin shank, meets admirably the requirements for placing all prepared roofing. The head is reinforced on the shank so that it will not easily pull or break off.

These extra large head nails are unusually good for special chill work in foundries.

Length	Gauge	Count per Pound		Diameter of Head
		Bright	Galvanized	
¾ inch	No. 11	185	165	⅝ inch
⅞ "	" 11	175	156	⅝ "
1 "	" 11	155	145	⅝ "
1⅛ "	" 11	150	135	⅝ "
1¼ "	" 11	135	125	⅝ "
1½ "	" 11	110	100	⅝ "
1¾ "	" 11	90	80	⅝ "
¾ "	" 12	205	180	⅝ "
⅞ "	" 12	195	172	⅝ "
1 "	" 12	180	160	⅝ "
1⅛ "	" 12	170	152	⅝ "
1¼ "	" 12	165	148	⅝ "
1½ "	" 12	141	133	⅝ "
1¾ "	" 12	120	110	⅝ "

Regular Head Roofing Nails

Flat Head, Diamond Point



Size	Length and Gauge	Diam. Head	Extras per 100 Lbs.		Approx. No. to Lb.
			Barbed	Smooth	
¾"	¾ inch No. 13	¼	$1.95	$1.95	714
⅞"	⅞ " " 12	9/32	1.70	1.70	469
1"	1 " " 12	9/32	1.60	1.60	411
1⅛"	1⅛ " " 12	9/32	1.45	1.40	365
1¼"	1¼ " " 11	5/16	1.30	1.25	251
1⅜"	1⅜ " " 11	5/16	1.20	1.15	230
1½"	1½ " " 10	11/32	1.00	.95	176
1¾"	1¾ " " 10	11/32	.90	.85	151
2"	2 " " 9	⅜	.80	.75	103

American Leak-Proof Roofing Nails

Hot Galvanized-Zinc Coated





	Extra for Size Subject to Charge for Galvanizing	Approximate Count
1½x 9.....	$2.55	100 per lb.
1¾x 9.....	2.30	90 per lb.
2 x 9.....	2.10	80 per lb.
1½x10.....	2.80	120 per lb.
1¾x10.....	2.55	110 per lb.
2 x10.....	2.35	100 per lb.

A great time and money saver over the old method of nail and lead washer combined.

The extra heavy coating of zinc over the entire surface of the nail—shank as well as head—insures the fullest protection against rust so they will last the life of the best grades of corrugated roofing.

The self-sealing principle involved in the design and construction of this nail is the most important feature. The curved spring head does the work, making a perfect seal.

The nub of the head of the nail aids in driving so as to prevent distortion of the head.

American Anchoroof Nails



American Anchoroof Nails lock asbestos shingles and prevent the ends from being cracked or broken in high winds and storms.

Made in one-piece solid copper style only.

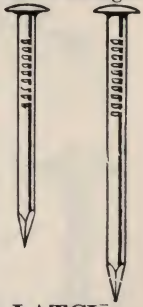
Available in the popular sizes.

Prices on Application

American Beer Case Nails

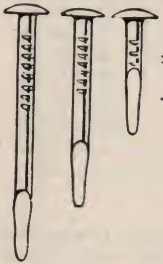
BEER case nails properly designed for the work intended for them. Made of special steel—they drive straight and true—resist bending—hold tenaciously.

Various lengths and gauges used according to thickness and grade of lumber. Standard sizes shown below:



STRAP NAILS

Length	Gauge	Approx. Count Per Lb.
1¼	13	410
1½	12½	300
1¾	12	225
2	11½	175

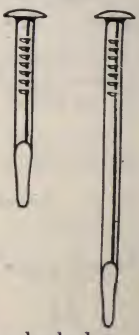


HINGE, LOCK and LATCH PLATE NAILS

Length	Gauge	Approx. Count Per Lb.
⅝	14	1030
¾	14	860
⅝	13	800
¾	13	680
⅞	13	585
1⅛	13	450
1¼	13	410
1 5/16	13	390

CLEAT NAILS

Length	Gauge	Approx. Count Per Lb.
1⅛	14½	686
1	14	669
1⅛	13	458
1 3/16	13	449
1¼	13	440
1⅜	13	385
1 5/16	13	399
1⅝	12½	268
1⅞	12	216



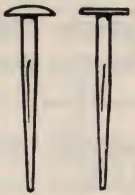
All nails can be furnished in Bright, Galvanized, Tinned or Pearson (Cement) Coated, to match finish of hardware, smooth or barbed.

STRAP NAILS—Oval Head, Short Diamond Point.

OTHER STYLES—Oval Head, Long Duck Bill Point.

Peerless Beer Case Nails

Oval or
Flat head



For Hinges, Locks and Latch Plates

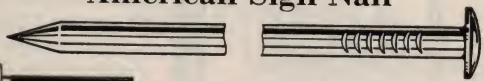
Made of special steel—Peerless Beer Case Nails will not break when clinched; they will drive straight and resist bending. The long tapering body or shank of the nail eliminates splitting of the wood and makes a perfect clinch.

These nails can be furnished in bright, blued, galvanized, tinned or (Pearson) cement coated, and with oval or flat heads.

Estimated Count per Pound on Peerless Beer Case Nails

Length	Gauge	No. 12	No. 12½	No. 13	No. 14	No. 15
5/8"		688	840	880	1212	1544
3/4"		640	768	816	1118	1420
7/8"		592	696	752	1024	1296
1"		544	624	688	930	1172
1 1/8"		480	552	608	828	1048
1 1/4"		416	480	544	734	924

American Sign Nail





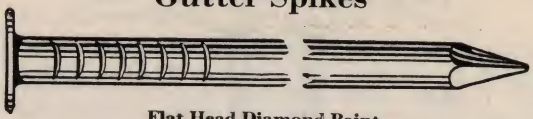
For hanging paper or metal signs

OVAL HEAD—NEEDLE POINT

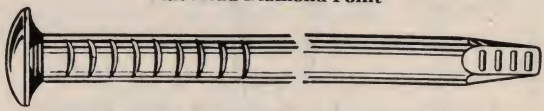
Length	Gauge	Approx. Count Per Lb.
15	8	11

Other lengths and gauges furnished.

Gutter Spikes



Flat Head Diamond Point



Countersunk Oval Head Chisel Point

Made in lengths of 5½ inches to 10½ inches inclusive, with either flat head, diamond point, or oval head, chisel point.

Made in various gauges from 3/16-inch to No. 8, inclusive.

Bright or Galvanized.

Basket Nails





Flat Head Diamond Point

Are usually made ⅝-inch or ¾-inch in length, of No. 18 gauge smooth wire, with needle point and large flat head.

PRICES on these nails are the same as for miscellaneous nails, plus extras for special features, such as for head and point, shown in Miscellaneous Nail list.

Saddlery Nails (Hame Rivet)





Oval Head Long Diamond Point, Annealed, Smooth

Made in 1½-inch length of No. 7 and No. 7½ gauge wires.

These nails are used as rivets for fastening trimming to a hame. After they are driven the point is cut off and the end is riveted.

Long Diamond Point

Oil Quench Hardened Concrete Nails



The increase in concrete construction of buildings, etc., has demanded a new type of nail for fastening Metal Corner Beading, Door Bucks, and Carpet Strips to cement.

All lengths and gauges can be supplied. Packed in kegs of 100 lbs. each.

Shade Nails

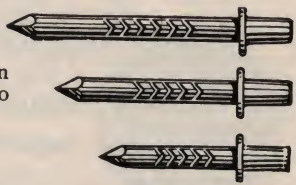
Made in ¾, ⅞ and 1-inch lengths, of No. 13 gauge wire, with slightly countersunk ¼-inch diameter flat head, and needle point.

PRICES on these nails are the same as for miscellaneous nails, plus extras for special features, such as for head and point, as shown in Miscellaneous Nail list.



Shade Roller Pins

These pins are made in different sizes, according to specification.

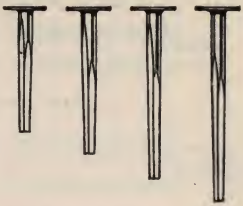


Illustrations Actual Size

Electrotype Nails

Made in all sizes, with or without die marks. Prices on application.

Peerless Cut Nails



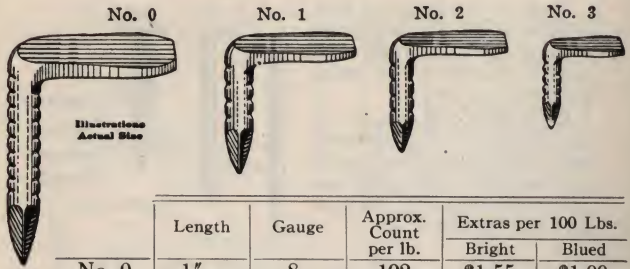
This type of nail has all of the advantages of the wire nail as well as the desirable features of the cut nail.

Made in lengths up to and including 1¼ inches, all gauges, for attaching wood hoops to barrels, for applying shingles, etc.

The points on Peerless Cut Nails are especially adapted for easy clinching.

Prices on application.

Hoop Fastener Nails



	Length	Gauge	Approx. Count per lb.	Extras per 100 Lbs.	
				Bright	Blued
No. 0	1″	8	102	$1.55	$1.90
No. 1	9/16″	9	212	1.65	2.00
No. 2	½″	10½	308	2.20	2.55
No. 3	⅜″	13	832	3.50	3.85

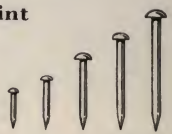
Galvanized, same extra as applies to Standard Nails.
Packed 100 lbs. to the keg.

Steel Escutcheon Pins

Oval Head, Needle Point

Made in various lengths and gauges, with oval head and needle point.

Prices on these nails are the same as for miscellaneous nails, plus extras for special features, such as for head and point as shown in Miscellaneous Nail list.



Illustrations Actual Size

Mrs. McGregor's Family Nail Box

Mrs. McGregor's Family Nail Box contains a wide assortment of small-sized nails that are particularly adapted to household use. The satisfaction of having the right sized nail when needed is well worth the cost of this handy package. Every housekeeper is a prospective customer. The colorful display box attracts instant attention and sells on sight. Packed in 7 ounce boxes, one gross to the case.





American Handy Nail Box



American Handy Nail Box is somewhat different than Mrs. McGregor's Nail Box mentioned above in that it is larger and contains a wider assortment of larger nails for use around the house. Packed in 11 ounce boxes, one-half gross to the case.

Tie and Pole Dating or Marking Nails

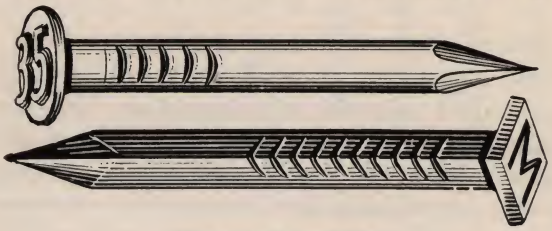


Illustration Actual Size

Raised or Depressed Figures
Extra Per 100 Lbs. for Standard Marking*

	¼ inch	5/16 inch
1½"	$2.50	$2.50
1¾"	2.25	2.25
2"	2.00	2.00
2½"	1.75	1.75

Galvanizing same extra as applies to Standard Nails.

Square Shank Nails, ¼ inch and 5/16 inch square considered standard — advance 50 cents per 100 lbs. over round.

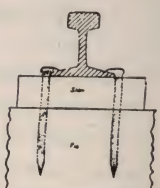
* Nails in above sizes marked with numerals for the preceding year, current year, and coming year, either in raised or depressed figures (last two digits only) are standard.

Markings other than standard figures, or standard figures on special gauged nails, are subject to additional extra charges.

Shimming Spikes

These spikes are used for fastening rails on trestle work where the spike is to be driven through a stringer (shim) into the tie beneath.

The orders for these spikes generally specify 7 in. or 8 in. long x 9/16 in. square. Price on Application.



Size, Measured Under Head	Approximate Number Per Keg
7 x 9/16	278
8 x 9/16	260

Reversed points, ¼c. per pound extra.

Other than regular sizes shown above can be furnished at a slight extra charge.

Packed in strong, well-made kegs of 200 lbs. each.

These spikes are driven mostly in hard timbers and it stands to reason that a spike with a clean-cut, sharp chisel point will facilitate the work. Heads will not fly off.

Railroad Spikes

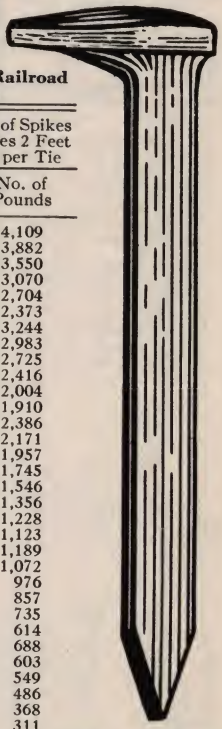
In.	In.	Extras Per 100 Lbs.
¼	1¼	$2.50
¼	1½	2.25
¼	2 to 2½	2.00
¼	3	1.85
5/16	2 to 4	1.70
⅜	2	1.25
⅜	2½	1.15
⅜	3 to 4½	$0.90
7/16	3	.75
7/16	3½ to 4½	.65
½	2½	.65
½	3 to 3½	.50
½	4 to 5	.25
*9/16	4½ and larger	Base

Reversed points, ¼c. per pound extra.

Other than regular sizes shown above can be furnished at a slight extra charge.

Packed in kegs of 200 pounds.

*9/16-inch railroad spikes are not made by us, but we carry in stock sizes 5 and 5½ x 9/16 for convenience of customers in making shipment of mixed carloads of our railroad and boat spikes.



Data and Approximate Number of Railroad Spikes to a Keg of 200 Pounds

Size Meas. Under Head	Aver. No. per Keg	Kegs and Pounds of Spikes per Mile With Ties 2 Feet Apart. 4 Spikes per Tie	
		No. of Kegs	No. of Pounds
5 x½	514	20.546	4,109
4½x½	544	19.412	3,882
4 x½	595	17.748	3,550
3½x½	688	15.349	3,070
3 x½	781	13.521	2,704
2½x½	890	11.865	2,373
5 x7/16	651	16.221	3,244
4½x7/16	708	14.915	2,983
4 x7/16	775	13.626	2,725
3½x7/16	874.	12.082	2,416
3 x7/16	1054	10.019	2,004
2½x7/16	1106	9.555	1,910
5 x⅜	885	11.932	2,386
4½x⅜	973	10.853	2,171
4 x⅜	1079	9.787	1,957
3½x⅜	1210	8.727	1,745
3 x⅜	1366	7.731	1,546
2½x⅜	1558	6.778	1,356
2¼x⅜	1720	6.140	1,228
2 x⅜	1881	5.614	1,123
4 x5/16	1777	5.943	1,189
3½x5/16	1971	5.358	1,072
3 x5/16	2165	4.878	976
2½x5/16	2463	4.287	857
2 x5/16	2873	3.676	735
1½x5/16	3438	3.072	614
3 x¼	3068	3.442	688
2½x¼	3501	3.016	603
2¼x¼	3846	2.746	549
2 x¼	4348	2.429	486
1½x¼	5734	1.842	368
1¼x¼	6801	1.553	311

NOTE—The above is given as approximate, and Company is not to be bound in any way to protect these figures.

Barge Spikes

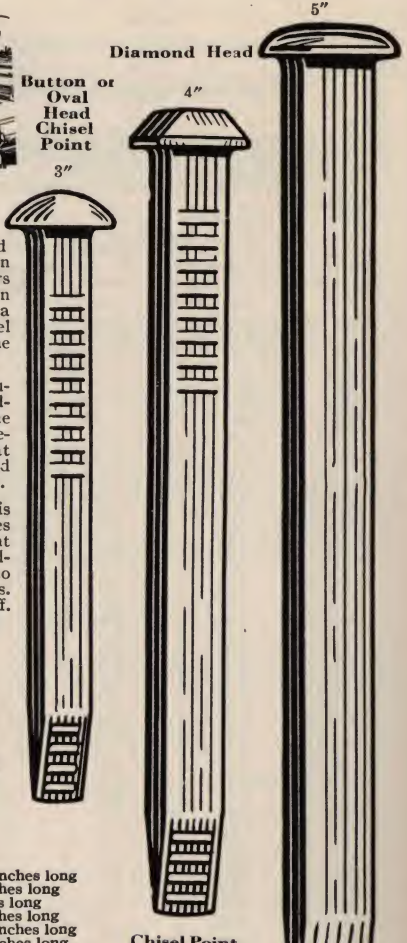


Boat, railroad and barge spikes are driven mostly in hard timbers and it stands to reason that a spike with a clean cut, sharp, chisel point will facilitate the work.

Our process of manufacture insures a product that has all the essential features necessary in a spike that will drive easily and hold well after driven.

The proper stock is used to make spikes that will drive straight and true and our product runs uniform as to lengths and gauges. Heads will not fly off.

Also see Square Boat Spikes and Railroad Spikes.



Illustrations Actual Size

Sizes

¼	inch square,	3 to 3 ½ inches long
¼	" "	4 to 8 inches long
5/16	" "	3 ½ inches long
5/16	" "	4 to 8 inches long
3/8	" "	3 to 3 ½ inches long
3/8	" "	4 to 12 inches long
7/16	" "	6 to 12 inches long
½	" "	6 to 12 inches long
5/8	" "	8 to 16 inches long

In kegs of 200 pounds.

Button or Oval Head considered standard and will be furnished unless orders specifically call for Diamond Head or Flat Head.

Square Boat Spikes

Diamond Head—Chisel Point



Also used for dock and heavy plank work

	Length Inches			Extras per 100 Lbs.
¼ inch square,	3	to	3½	$1.25
¼ inch square,	4	to	8	1.00
5/16 inch square,	3½			.95
5/16 inch square,	4	to	8	.70
⅜ inch square,	3	to	3½	.80
⅜ inch square,	4	to	12	.55
7/16 inch square,	6	to	12	.45
½ inch square,	6	to	12	.40
½ inch square,	8	to	16	.40

OTHER SIZES: Other than regular sizes shown above, can be furnished at a slight extra charge.

Packed in 200-lb. kegs.

Approximate Number of Boat Nails per Keg of 200 Pounds

	Length, Inches			
	4	5	6	7
5/8 in. sq.	.....	.....	.....	.....
½ in. sq.	.....	.....	.....	.....
7/16 in. sq.	.....	.....	.....	480
⅜ in. sq.	1,114	930	816	690
5/16 in. sq.	1,776	1,342	1,124	978
¼ in. sq.	2,576	2,134	1,778	1,488

	Length, Inches						
	8	9	10	11	12	13	14
5/8 in. sq.	214	190	176	.....	144	.....	122
½ in. sq.	324	286	258	244	220	.....	192
7/16 in. sq.	438	.....	378	.....	.....	.....	.....
⅜ in. sq.	622	532	492	.....	434	.....	.....
5/16 in. sq.	858	776	705	.....	.....	.....	.....
¼ in. sq.	1,382	.....	.....	.....	.....	.....	.....

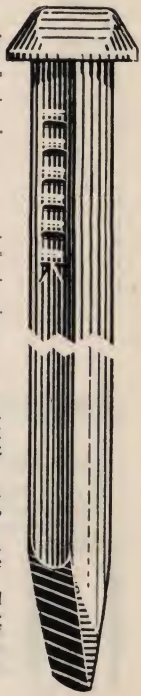
NOTE— The above is given as **approximate**, and the Company is not to be bound in any way to protect these figures.

These are driven mostly in hard timbers and it stands to reason that a spike with a clean-cut sharp, chisel point will facilitate the work.

Our process of manufacture insures a product that has all the essential features necessary in a spike that will drive easily and hold well after driven.

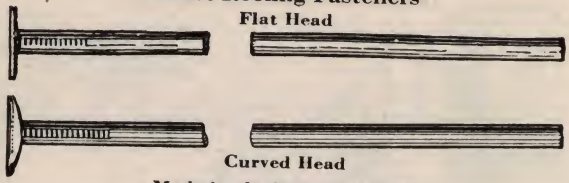
The proper stock is used to make spikes that will drive straight and true, and our product runs uniform as to lengths and gauge. Heads will not fly off

For a first-class job in bridge or trestle work use AMERICAN STEEL & WIRE COMPANY *Boat Nails.*



Sheet Roofing Fasteners. Egg Case or Crate Fasteners, and Meat Tag Fasteners

Sheet Roofing Fasteners



Flat Head

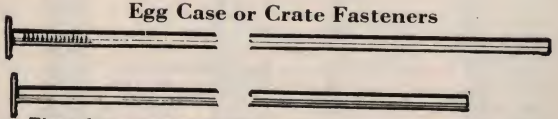
Curved Head

Made in the Following Sizes

Length	Diameter	Approximate Count per Pound
6 inch	⅛ inch	46
7 "	⅛ inch	40
8 "	⅛ inch	34
9 "	⅛ inch	31
10 "	⅛ inch	28
12 "	⅛ inch	23
14 "	⅛ inch	20
8 "	No. 10 gauge	30
9 "	"	27
10 "	"	24
12 "	"	20
13 "	"	....
14 "	"	....
15 "	"	....
15½"	"	....

Annealed or galvanized

Egg Case or Crate Fasteners



These fasteners are made in different sizes, according to specifications. Price upon application.

Tinned Meat Tag Fasteners





Actual Size

Packed 1,000 in a carton, 150 cartons to the case. Also in kegs. Approximately 1,000 to the pound.

Solid Copper Wire Nails



The life of a roof largely depends upon its fastening. Regardless of the roofing material used, its service ends when the nails fail.

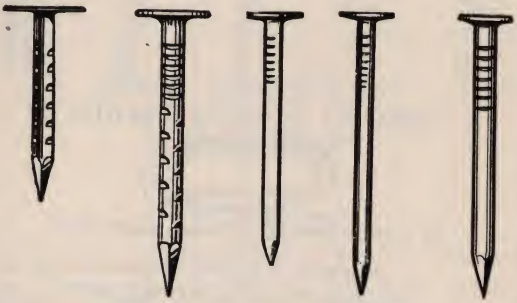
Copper Nails last indefinitely. They are moisture and corrosion proof and will not "frost-crack."

Contractors agree as to the superior advantages of Copper Nails.

Copper Nails are used for many purposes besides roofing and we can supply any size or style required, but make regularly—

ROOFING
SLATING

SHINGLE
COMMON



FIRE DOOR NAILS

Nails for use in applying the metal covering to wood cores of tin clad Fire Doors have been variously specified but usually by length and gauge.

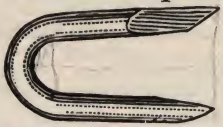
Recently the Underwriters' Laboratories have established new limits as to maximum and minimum diameters which will be acceptable and these limits permit the furnishing of various Standard Nails. Their requirements call for Nails not less than 0.09 inch nor heavier than 0.100 inch in diameter and the usual lengths called for are 1¼ inch and 2 inch.

These specifications will permit the use of 3d Shingle Nails or 6d Box Nails which are of the following dimensions:

3d Shingle	1¼ inch	No. 13 gauge
6d Box	2 inch	No. 12½ gauge

Fire Door Nails are usually called for full barbed.

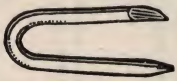
Fence Staples



9 Gauge Bright or Galvanized Wire

Length	Spread at Shoulders	Approx. No. Per Lb.	Extras Per 100 Lbs.	
			Bright	Galvanized
3/4"	1/4"	152	$ .80	$1.30
7/8"	1/4"	120	.80	1.30
1"	1/4"	108	.80	1.30
1 1/8"	1/4"	96	.80	1.30
1 1/4"	1/4"	87	.80	1.30
1 3/8"	1/4"	72	.80	1.30
1 3/4"	1/4"	65	.80	1.30
2"	1/4"	58	.80	1.30
2 1/4"	1/4"	47	.80	1.30
2 1/2"	1/4"	40	.80	1.30

Poultry Netting Staples



14 Gauge Bright or Galvanized Wire

Length	Spread at Shoulders	Approx. No. Per Lb.	Extras Per 100 Lbs.	
			Bright	Galvanized
3/4"	3/16"	480	$2.05	$2.75
7/8"	3/16"	416	2.05	2.75
1"	3/16"	352	2.05	2.75

Hoop Staples



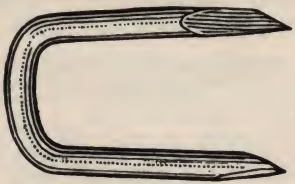
14 Gauge Bright or Galvanized Wire

Length	Spread at Shoulders	Approx. No. Per Lb.	Extras Per 100 Lbs.	
			Bright	Galvanized
1/2"	3/16"	610	$2.90	$3.60
5/8"	3/16"	568	2.60	3.30

(a) Above sizes are stock items. Other sizes, finishes or special features can be furnished at special prices.

(b) Above extras are subject to 10% discount when items are shipped in straight or mixed cars.

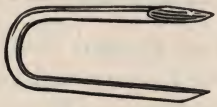
Ribbon Wire Staples



9 Gauge Bright or Galvanized Wire

Length	Spread at Shoulders	Approx. No. Per Lb.	Extras Per 100 Lbs.	
			Bright	Galvanized
1½″	9/16″	68	$ .80	$1.30
1¾″	9/16″	60	.80	1.30
2″	9/16″	51	.80	1.30

Metal Lath Staples



14 and 15 Gauge
Blued, Bright or Galvanized Wire
17/64″ Spread at Shoulder

Length	Extras Per 100 Lbs.					
	Blued		Bright		Galvanized	
	14	15	14	15	14	15
1″	$2.95	$3.10	$2.60	$2.75	$3.30	$3.55
1⅛″	2.95	3.10	2.60	2.75	3.30	3.55
1¼″	2.95	3.10	2.60	2.75	3.30	3.55
1½″	2.95	3.10	2.60	2.75	3.30	3.55

Approx. Count Per Lb.

	1″	1⅛″	1¼″	1½″
14 Gauge.....	391	349	314	227
15 Gauge.....	492	438	393	293

(a) Above sizes are stock items. Other sizes, finishes or special features can be furnished at special prices.

(b) Above extras are subject to 10% discount when items are shipped in straight or mixed cars.

For Real Corrosion Resistance, use American Steel and Wire Company's U S S Stainless Steel Nails

If you have nailing problems where ordinary nails quickly corrode due to the presence of Acids and Alkalis or their compounds, try nails made from the new alloys of Nickel, Chromium and Steel known as U S S Stainless Steel.

These nails are practically completely resistant to the action of strong solutions of Salt brine, any strength of cold acetic acid or vinegar and up to 10% strength if this acid is hot, all Alkaline solutions iucluding Ammonium hydroxide, fruit and vegetable juices, milk and dairy products, photographic reagents, paper and wood pulp, solutions of zinc chloride and zinc sulphate as well as bichloride of mercury solutions of usual antiseptic strength, etc.

These are only a few of a long list of economic and industrial substances which are incapable of attacking clean surfaces of U S S 18-8 Stainless Steel Nails.

These nails are therefore to be fully recommended for the construction of brine tanks, sluices, chemical vats and for the nailing of containers which are subjected to contact with any of these substances, also where food products must be protected against discoloration by nail contact. These nails have all of the physical properties of ordinary nails as regards stiffness, ease of driving and holding power.

Acid Etched Nails

The Real Test of a Nail's Value is its Holding Power

AMERICAN STEEL & WIRE COMPANY'S ACID ETCHED NAILS develop this property of holding power to the highest now known degree.

Our acid etched nails are made by a special process which forms on the surface of the nail a coating which is part of the steel itself and can not be rubbed off, is neither affected by heat or cold, nor becomes tacky or sticky.

Actual tests over a considerable period have proved this nail capable of developing at least 35% greater resistance to immediate withdrawal than the best cement coated nails, which heretofore have been considered the last word in holding power.

The additional holding power makes it possible to reduce the length and gauge of the nails employed or their number. This reflects itself in a real saving where ordinary wear resistance is required and provides a large margin of additional safety when it is desirable.

Pearson Coated Nails



The substantial reputation of Pearson Coated Nails is gained from many years of faithful service. The holding ability of the coating compound has been measured and tried by experience and proven adequate for any service where necessary to employ nails of extra holding power over plain nails.



Pearson Coated Nails

Stock Sizes in 100 Lb. Kegs

EXTRAS PER 100 LBS.

Effective Aug. 1, 1939

Coolers

2d	$2.50
3d	2.15
4d	1.50
5d	1.20
6d	1.10
7d	.95
8d	.75
9d	.70
10d	.65

Sinkers

Countersunk Heads

2d	$2.55
3d	2.20
4d	1.55
5d	1.25
6d	1.15
7d	1.00
8d	.80
9d	.75
10d	.70
12d	.65
16d	.60
20d	.55
30d	.55
40d	.55
50d	.55
60d	.55

Corkers

Countersunk Heads

2d	$2.55
3d	2.05
4d	1.25
5d	1.25
6d	1.05
7d	1.00
8d	.80
9d	.75
10d	.65
12d	.65
16d	.60
20d	.55
30d	.55
40d	.55
50d	.55
60d	.55

Fruit Box

Large Flat Head

4d	$2.05

Anchor — Dual Heads

2″ x 6	$2.85
2¼″ x 6	2.80
2½″ x 6	2.75
2″ x 7	2.95
2¼″ x 7	2.90
2½″ x 7	2.85

Egg Case

Large Flat Head

2d	$2.65
3d	2.25
4d	1.55

Apple Box

Large Flat Head

5d	$1.55
5½d	1.35

Box

2d	$2.90
3d	2.50
4d	2.05
4½d	1.90
5d	1.90
6d	1.25
7d	1.20
8d	.95
9d	.90
10d	.80

Flooring Brads — Parquet

Deep Countersunk Head — Long Diamond Point

1⅛″ x 15	$2.15
1¼″ x 15	2.05
1⅛″ x 16	2.40
1¼″ x 16	2.30

Needle Points — $.15 per 100 lbs. extra.

Car — Light

Barbed

	Oval Ctsk. Head	Flat Ctsk. Head
4d	$1.40	$1.30
5d	1.10	1.00
6d	1.05	.95
7d	.90	.80
8d	.85	.75
9d	.75	.65
10d	.75	.65
12d	.75	.65
16d	.70	.60
20d	.60	.50
30d	.60	.50
40d	.60	.50
50d	.70	.60
60d	.70	.60

Car — Heavy

Barbed

	Oval Ctsk. Head	Flat Ctsk. Head
4d	$1.30	$1.20
5d	1.05	.95
6d	1.00	.90
7d	.85	.75
8d	.80	.70
9d	.75	.65
10d	.75	.65
12d	.70	.60
16d	.70	.60
20d	.60	.50
30d	.60	.50
40d	.70	.60
50d	.70	.60
60d	.70	.60

Orange Box

Large Flat Head

4d	$2.15

Veneer Box

Large Flat Head Needle Point

4d	$1.70

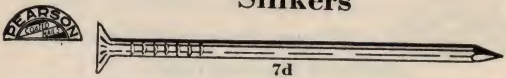
Above sizes in uncoated bright — deduct 15c per 100 lbs.

(a) For extras covering **Special Features** on above nails refer to page 12.

(b) Refer to **"Important Note"** shown on page 13 concerning stock and non-stock items which also applies to Pearson (cement) coated nails.

(c) Above extras subject to 10% discount when nails shipped in straight or mixed car.

Sinkers



The best all-around nail made for either hand or machine driving. For use in all styles of wooden shipping packages and for all the every day uses to which nails are put. The heads cannot break or pull off.

Size	Extras Per 100 Lbs.	Number of Nails Per Lb.	Length (Inches)	Gauge No.	Diam. Head (Inch)
2d	$2.55	1084	1	16	5/32
3d	2.20	848	1 1/8	15 1/2	11/64
4d	1.55	488	1 3/8	14	13/64
5d	1.25	364	1 5/8	13 1/2	7/32
6d	1.15	275	1 7/8	13	15/64
7d	1.00	212	2 1/8	12 1/2	1/4
8d	.80	142	2 3/8	11 1/2	17/64
9d	.75	130	2 5/8	11 1/2	17/64
10d	.70	104	2 7/8	11	9/32
12d	.65	77	3 1/8	10	5/16
16d	.60	61	3 1/4	9	11/32
20d	.55	37	3 3/4	7	3/8
30d	.55	29	4 1/4	6	13/32
40d	.55	21	4 3/4	5	7/16
50d	.55	16	5 1/4	4	15/32
60d	.55	13	5 3/4	3	1/2



Corner Bead Staples

Usually polished style 2″ length No. 8 gauge with 7/8″ spread at points 3/8″ at shoulder.

For applying metal beading and metal lath to building tile.

Brick Staples



Usually polished style, 2½″ length No. 6 gauge. With 3/8″ uniform spread.



Electricians Staple Nails

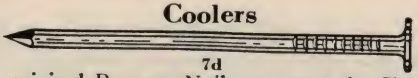
These staple nails are easier to drive and hold insulated electrical wires securely. They may be placed near the edge of the molding without danger of splitting the wood.

Finished in dark enamel for stained woodwork, and bright steel finish for light colored woodwork.

Made in ½ inch and 5/8 inch lengths, gauges No. 12, 13, 14 and 15.

Prices on Application

Coolers



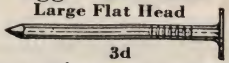
7d

The original Pearson Nail—same as the Sinkers in all particulars except the head. The Cooler head is flat underneath and of slightly greater diameter than that of the Sinkers. Coolers are perfectly satisfactory for hand driving in the softer woods, but are especially designed for machine driving in boxes, crates, or other shipping packages.

Size	Extras Per 100 Lbs.	Number of Nails Per Lb.	Length (Inches)	Gauge No.	Diam. Head (Inch)
2d	$2.50	1084	1	16	11/64
3d	2.15	848	1 1/8	15 1/2	3/16
4d	1.50	488	1 3/8	14	7/32
5d	1.20	364	1 5/8	13 1/2	15/64
6d	1.10	275	1 7/8	13	1/4
7d	.95	212	2 1/8	12 1/2	17/64
8d	.75	142	2 3/8	11 1/2	9/32
9d	.70	130	2 5/8	11 1/2	9/32
10d	.65	104	2 7/8	11	19/64

Egg Case Nails

Large Flat Head





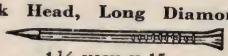
3d

Endorsed by the carriers, and having every feature desirable for the use intended, these are undoubtedly the only perfect nails for egg cases.

Size	Extras Per 100 Lbs.	Number of Nails Per Lb.	Length (Inches)	Gauge No.	Diam. Head (Inch)
2d	$2.65	1050	1	16	3/16
3d	2.25	738	1 1/8	15	1/4
4d	1.55	435	1 1/2	14	9/32

Parquet Floor Nails

Deep Countersunk Head, Long Diamond Point





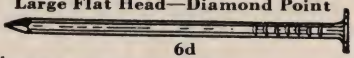
1⅛ INCH X 15

They leave a small, clean, easily puttied hole. The holding-power of the coating overcomes any tendency of the floor to spring or squeak. Net prices quoted on application.

LENGTHS: 1⅛ inch and 1¼ inch. GAUGES: Nos. 15 and 16. POINTS: Either Long Diamond or Needle. PACKINGS: In 100 lb. kegs and 25 lb. boxes.

Box Nails

Large Flat Head—Diamond Point



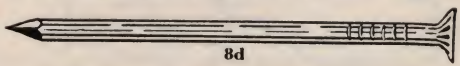
6d

Box Nails are necessarily lighter in wire than Sinkers, but where conditions permit of their use are economical because of the larger count.

Size	Extras Per 100 Lbs.	Number of Nails Per Lb.	Length (Inches)	Gauge No.	Diam. Head (Inch)
2d	$2.90	1300	1	16½	11/64
3d	2.50	950	1⅛	16	3/16
4d	2.05	710	1⅜	15½	13/64
4½d	1.90	578	1½	15	7/32
5d	1.90	536	1⅝	15	7/32
6d	1.25	306	1⅞	13½	¼
7d	1.20	268	2⅛	13½	¼
8d	.95	186	2⅜	12½	17/64
9d	.90	167	2⅝	12½	17/64
10d	.80	118	2⅞	11½	19/64

Corkers

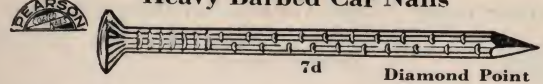
Flat Countersunk Head. Diamond Point



8d

Size	Extras Per 100 Lbs.	Number of Nails Per Lb.	Length (Inches)	Gauge No.	Diam. Head (Inch)
2d	$2.55	1084	1	16	5/32
3d	2.05	678	1¼	15	3/16
4d	1.25	392	1½	13½	7/32
5d	1.25	364	1⅝	13½	7/32
6d	1.05	232	1⅞	12½	¼
7d	1.00	212	2⅛	12½	¼
8d	.80	129	2⅜	11	9/32
9d	.75	114	2⅝	11	9/32
10d	.65	84	2⅞	10	5/16
12d	.65	77	3⅛	10	5/16
16d	.60	59	3⅜	9	11/32
20d	.55	36	3⅞	7	⅜
30d	.55	27	4⅜	6	13/32
40d	.55	21	4⅞	5	7/16
50d	.55	16	5⅜	4	15/32
60d	.55	12	5⅞	3	½

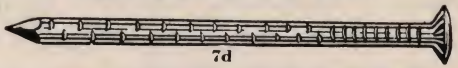
Heavy Barbed Car Nails



Specify whether Csk. Oval or Flat Csk. Heads

Size	Extras		Number of Nails Per Lb.	Length (Inches)	Gauge No.	Diam. Head (Inch)
	Oval Ctsk.	Flat Ctsk.				
4d	$1.30	$1.20	274	1½	12	¼
5d	1.05	.95	138	1¾	10	9/32
6d	1.00	.90	117	2	10	9/32
7d	.85	.75	85	2¼	9	5/16
8d	.80	.70	78	2½	9	5/16
9d	.75	.65	62	2¾	8	11/32
10d	.75	.65	55	3	8	11/32
12d	.70	.60	44	3¼	7	3/8
16d	.70	.60	38	3½	7	3/8
20d	.60	.50	29	4	6	13/32
30d	.60	.50	26	4½	6	13/32
40d	.70	.60	20	5	5	7/16
50d	.70	.60	15	5½	4	15/32
60d	.70	.60	14	6	4	15/32

Light Barbed Car Nails

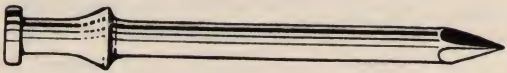


Specify whether Csk. Oval or Flat Csk. Heads

Size	Extras		Number of Nails Per Lb.	Length (Inches)	Gauge No.	Diam. Head (Inch)
	Oval Ctsk.	Flat Ctsk.				
4d	$1.40	$1.30	335	1½	13	15/64
5d	1.10	1.00	176	1¾	11	17/64
6d	1.05	.95	149	2	11	17/64
7d	.90	.80	103	2¼	10	9/32
8d	.85	.75	96	2½	10	9/32
9d	.75	.65	74	2¾	9	5/16
10d	.75	.65	65	3	9	5/16
12d	.75	.65	51	3¼	8	11/32
16d	.70	.60	48	3½	8	11/32
20d	.60	.50	36	4	7	3/8
30d	.60	.50	31	4½	7	3/8
40d	.60	.50	24	5	6	13/32
50d	.70	.60	17	5½	5	7/16
60d	.70	.60	16	6	5	7/16

American Dual Head Anchor Nails

Pearson Coated



For anchoring automobiles, machinery, etc., to freight car floors in shipping.

These nails are driven through the lower flanges of band steel and through wooden cleats into the floor of the car. The object of the Dual Head is to facilitate withdrawal of the Nails.

Made in lengths 2, 2¼, and 2½ inches, measured under the lower head—this means 2½, 2¾ and 3 inches over-all.

Principal demand is for 2¼ inch No. 6 gauge.

Packed in kegs of 100 lbs. each.

Length	Extras per 100 Lbs. No. 6	Approximate Count per Pound No. 6	Extras per 100 Lbs. No. 7	Approximate Count per Pound No. 7
2″	$2.85	43	$2.95	49
2¼″	2.80	39	2.90	44
2½″	2.75	34	2.85	39

Special Box Nails

Large Flat Head—Diamond Point



Orange Box

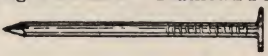
For Western orange boxes and other fruit packages.

NOTE.—As a great majority of 4d Box Nails used on the Pacific Coast are for orange boxes, Orange Box Nails will be shipped on all orders sent to our Pacific Coast Agents for "4d Box Nails," instead of the regular 4d Box Nails shown on page 62, unless orders specifically instruct to the contrary. This does not apply to any but orders from Pacific Coast territory. When wanted elsewhere "Orange Box Nails" must be specified on the order.

Size	Extra Per 100 Lbs.	Number of Nails Per Lb.	Length (Inches)	Gauge No.	Diam. Head (Inch)
4d	$2.15	679	1¼	15	7/32

Fruit Box

Large Flat Head—Diamond Point



For Southern orange boxes, pineapple crates, and other fruit packages.

NOTE.—When Fruit Box Nails are wanted instead of the regular 4d Box, it should be distinctly so specified on orders.

4d	$2.05	623	1⅜	15	7/32

Veneer Box

Large Flat Head—Needle Point



For hoopless orange boxes.

4d	$1.70	435	1½	14	¼

Apple Box

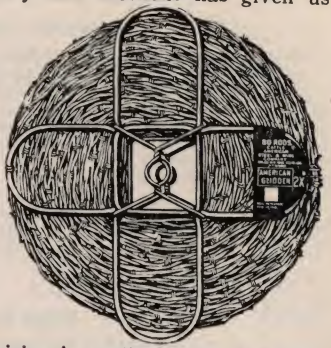
Large Flat Head—Diamond Point



5d	$1.55	418	1⅝	14	15/64
5½d	1.35	388	1¾	14	15/64

American Barbed Wire

We are pioneer producers of Barbed Wire and every improvement in machinery and methods has given us increased efficiency in manufacturing the highest grade of Barb Wire.



A superior grade of barbed wire must be made from proper steel to secure uniformity, high tensile strength and firm sharp barbs. Our machines insure regularity of twist and barbs accurately and firmly spaced.

A high grade of galvanizing is applied by our hot zinc coating method. This super type wire is wound uniformly on steel reels. All these qualities are insured by experienced supervision of men who have been long in the field.

You can instantly recognize American Barbed Wire by looking for the long used and established trade-marks on each spool.

SPECIAL GALVANIZED BARBED WIRE. In addition to furnishing our different brands of barbed wire with standard galvanizing, we will also furnish the same brands special galvanized and of the same quality of galvanizing as our telephone and telegraph wire.





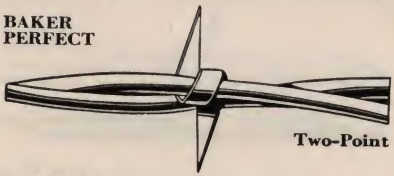


These are the long-used and established trade marks on our special brands of American Barbed Wire. Each in its own field stands for quality and excellence.

American Barbed Wire is manufactured to meet U. S. Government specifications.

American Barbed Wire — Continued

Baker Perfect Two-Point (Two Prongs)



Galvanized—80 Rod Spools

A very popular brand which has stood the test for 30 years, and is a strong favorite wherever used. The flat barbs hold firmly in place and show up sharp and clear.

There are many *so-called* Baker brands on the market, but only one genuine and original Baker Perfect. If you want the genuine, order BAKER PERFECT, and look for the registered trade mark on the spools.

80 ROD SPOOLS sold at a price per spool, and guaranteed to contain full 80 rods.

Thickset or Hog, barbs about 3 inches apart.

Regular or Cattle wire, barbs about 5 inches apart.

Main strands No. 12½ steel wire gauge.

Flat barbs wrapped once around one of the main strands.

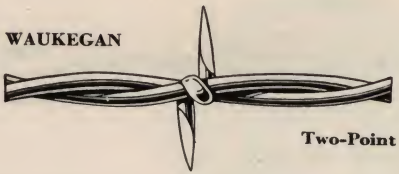
American Special Two-Point (Two Prongs)



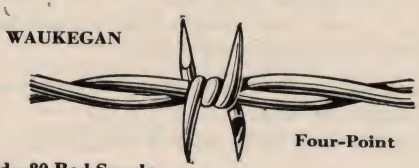
Galvanized and put up on 80 rod spools. Thickset or Hog wire, barbs about 3 inches apart. Regular or Cattle wire, barbs about 5 inches apart. Main strands of No. 14 steel wire gauge. Barbs are round and of No. 16 steel wire gauge wrapped twice around one of the main strands.

American Barbed Wire — Continued

Waukegan Two-Point (Two Prongs)



Waukegan Four-Point (Four Prongs)



Galvanized—80 Rod Spools

Look for the red tag with the registered trade mark "WAUKEGAN." Indian head stamped on every spool.

80 ROD SPOOLS sold at a price per spool, and guaranteed to contain full 80 rods.

Thickset or Hog Wire, 2-point, barbs about 3″ apart.

Thickset or Hog Wire, 4-point, barbs about 3″ apart.

Regular or Cattle Wire, 2-point, barbs about 5″ apart.

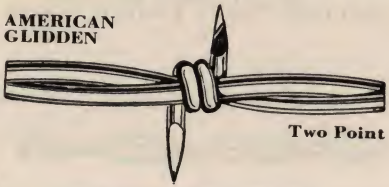
Regular or Cattle Wire, 4-point, barbs about 6″ apart.

Main strands of No. 12½ steel wire gauge.

Barbs are half-round and each barb is wrapped once around the main strand. This makes a single wrap for the 2-point wire and a double wrap for the 4-point.

American Barbed Wire—Continued

American Glidden Two Point (Two Prongs)



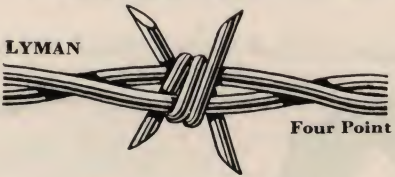
Galvanized—80 Rod Spools

The popular brand in all sections and for all general hog and cattle fence purposes—has many imitations, but no equal. If you want Glidden pattern insist on AMERICAN GLIDDEN.

Made in Thickset or Hog Wire, barbs about 3 inches apart.
Made in Regular or Cattle Wire, barbs about 5 inches apart.
Main strands of No. 12½ steel wire gauge.
Round Barbs of No. 14 steel wire gauge wrapped twice around one of the main strands.

80 ROD SPOOLS sold at a price per spool, and guaranteed to contain full 80 rods.

Lyman Four Point (Four Prongs)



Galvanized—80 Rod Spools

One of the oldest brands of barb wire on the market—the best barb wire to use when a strong, heavy barb wire fence is required. Is an effective barrier against hogs and all kinds of stock. Easily seen by animals on account of the larger size barbs.

Thickset or Hog wire, barbs about 4 inches apart.
Regular or Cattle wire, barbs about 6 inches apart.
Main strands of No. 12½ steel wire gauge.
Round barbs of No. 14 gauge.

Each barb consists of two pieces of wire one wrapped around one main strand and then around both main strands. The other piece interlocked and wrapped around both main strands.

80 ROD SPOOLS sold at a price per spool and guaranteed to contain full 80 rods.

Twisted Barbless, Ribbon and Coiled Spring Steel Fence Wire

2 Ply Twisted Barbless Wire, Galvanized



Popular gauge 12½, but 8, 9, 10, 11, 12, 13 and 14 gauges can be furnished.

Regularly wound on barb wire spools with 2 ply 12½ gauge furnished 80 rods or 100 lbs. per spool, while other gauges are furnished on 100 lb. spools only.

Galvanized Flat Twisted Ribbon Wire



Made from ½ inch No. 17 gauge wire and extra galvanized. Weight approximately 9 feet to the pound. Put up in catch weight reels.

This material usually purchased for fencing blooded stock and high grade horses, also used for fencing purposes by parks and cemeteries.

Galvanized Coiled Spring Steel Fence Wire





Made in sizes 7 to 12, inclusive.

Put up regularly in catch weight bundles, but can also be furnished in even 100 pound bundles without extra charge.

This coiled wire is used for making fences in various forms. We put into this wire the best stock, and it is so coiled that it will retain its springiness against all expansion and contraction due to weather conditions.

American Steel & Wire Co.'s Steel Wire Gauge

	Ft. per lb.
No. 7	11
No. 8	13.33
No. 9	16.7
No. 10	20
No. 11	24.61
No. 12	32

Extras on Merchant Quality Wire

In 100 Pound Bundles

	Annealed Per 100 Pounds	Galvanized Per 100 Pounds
Over ¼" to ½"	$0.20	$0.45
Over No. 6 to ¼"	.10	.35
No. 6 to No. 9, Inc.	Base	Base
No. 10	.05	.05
No. 11	.10	.10
No. 12—No. 12½	.15	.20
No. 13	.25	.35
No. 14	.35	.55
No. 15	.55	.85
No. 16	.75	1.10
No. 17	1.00	1.45
No. 18	1.50	2.25

Standard Coils—16" and 22" inside diameters.

Prices on special diameter coils quoted on application.

For special weight coils, weighing less than 100 pounds in standard diameters, extra charge is 5 cents per bundle.

Galvanized Brace Wire

Furnished Nos. 8 and 9 gauge wire, in 5-lb. coils, packed 20 coils to the bundle of 100 lbs. Sold in even 100-lb. quantities or multiples thereof, at $1.00 per 100 lbs. advance over price of No. 8 Galvanized Plain Fence Wire which is shown above.

Stone Wire

Made in sizes No. 16 gauge and finer. Bright, Annealed, Galvanized, Tinned and Coppered finishes.



Put up in 8-inch inside diameter coils, weighing 12 pounds each and paper wrapped.

Amercote Sterilized

American Wire and Peerless Tacks

American Wire



Peerless



Amercote Sterilized tacks are protected against corrosion.

Amercote Sterilized tacks are immediately identified by attractive deep blue finish.

Kept clean in paper lined kegs — also furnished in smaller packages, including ⅛ lb. fancy tri-colored window packages for household use.

Solid Copper Tacks

Where extreme atmospheric conditions are encountered, no better tacks can be used than those made of copper. Prices quoted on request.

LIST PRICES AND WEIGHTS

Galvanized AMERICAN Clothes Lines

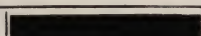
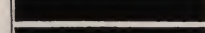
HOLLOW CABLE

No.	Description	No. of Wires	American Steel & WireCo.s STEEL WIRE GAUGE No.	List Price per Dozen Coils Bbl. Lots 100 Ft.	75 Ft.	50 Ft.
1		7	22	Price on Application		
2		9	22			
3		12	22			
4		11	20			

TWISTED

16		6	16	Price on Application		
17		6	17			
18		6	18			
19		6	19			
20		6	20			

SOLID

8		1	8	Price on Application		
9		1	9			
10		1	10			

FOUR STRAND No. 20 Bbl. Lots

100-ft. lengths, per doz.	Price on Application
75-ft. lengths, per doz.	
50-ft. lengths, per doz.	
40-ft. lengths, per doz.	

Twisted and Hollow Cable Wire Clothes Lines on Reels List Price per Reel

	1500 Ft.	2000 Ft.	2500 Ft.	3000 Ft.	4000 Ft.	5000 Ft.	6000 Ft.	8000 Ft.	10,000 Ft.
No. 1	Price on Application								
No. 2									
No. 3									
No. 4									
No. 16									
No. 17									
No. 18									
No. 19									
No. 20									



AMERICAN HEX-CEL POULTRY NETTING

In Hex-Cel the Lock Joint preserves the true hexagon shape of each cell. This property of the fabric results in a flat, non-buckling fence—makes the use of top and bottom boards unnecessary—and requires fewer supporting posts.

Hex-Cel Netting unrolls as straight and true as a steel yardstick—stretches up without a kink or a bulge. From top to bottom—from end to end—always full measure—never short.

Made in 12″, 18″, 24″, 30″, 36″, 42″, 48″, 60″ and 72″ widths. Put up in 150 foot rolls.

●

2″ mesh — 19 and 20 gauge.
1″ mesh — 20 gauge only.
Galvanized before weaving.
Galvanized after weaving.
Copper Bearing Steel.



AMERICAN SPECIAL STRAIGHT LINE POULTRY NETTING

American Special Straightline Poultry Netting has an exceptionally even weave—due to the strong lock joint construction. This feature plus the sturdy horizontal wires makes American Straightline very easy to erect.

Top and bottom boards are not required. Fewer posts needed. Rolls are guaranteed full weight and full length.

Made in 12″, 18″, 24″, 30″, 36″, 42″, 48″, 60″ and 72″ widths. Put up in 150 foot rolls.

2″ mesh — 19 and 20 gauge.
1″ mesh — 20 gauge only.
Galvanized before weaving.
Galvanized after weaving.
Copper Bearing Steel.

American Hexagon Fur Farm Netting

Specially designed for strength and long life. Made of Copper Bearing Steel with heavy coating of zinc applied after weaving.

Three-wire cables with tension curves at frequent intervals, form top and bottom selvages. The following specifications are recommended:

Foxes	1½x15 or 16—2x16
Dogs	2x14
Pheasants	1x18
Mink	¾x18
Skunk	1x18
Coons	1½x15—2x14 or 15
Rabbits	1x18
Muskrat	1x16 or 18
Turkeys	¾x18—1x16—1x18—1½x16

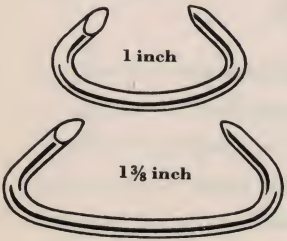
MADE IN ALL SIZES

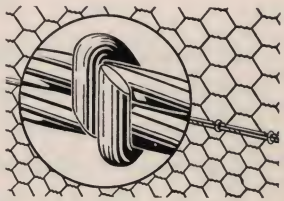
Prices quoted promptly on request.

We issue a completely illustrated catalogue giving full details on Netting, Guard Fence, Steel Posts and Steel Gates for Fur Farms.

Galvanized Wire Netting Clamp

Used for joining Fox and Fur Farm Fence and Netting. No. 12 Gauge Wire.





Approximate Count per Pound

1 inch—233 **1⅜ inch—175**

Wood and Nails

What wood to use for a certain piece of construction, in order to secure the greatest strength and longest wear in the finished article and to do it in the most economical way, has always been a question with manufacturers of Cabinet work, the makers of boxes and crates, as well as of builders of more pretentious structures, ranging from the simple shed to the most elaborate wooden structure.

The choice of these woods is by no means a matter of chance or convenience, but rather the result of costly slow and laboriously gained experience. While at one time it was the custom to employ such lumber as could be obtained from species of wood growing in close proximity to the manufacturing plant, in order to avoid long hauls by land or water, such custom has changed considerably. This has been brought about by manufacturers recognizing the fact that the economy achieved by avoiding long freight hauls, was many times entirely lost and such losses are sometimes doubled and trebled because the product proves itself unsatisfactory from the standpoint of endurance and immediate wear resistance, besides entailing costly adjustments to satisfy the consumer of the product.

The other item in durable and economical construction is found in the nails that are used to assemble or hold together the job. Nails have evoluted from the simple wood peg of the ancients to the most elaborately and scientifically designed forms, sizes and shapes. This scientific development of the nail has been brought about by constantly changing conditions in the art of wood construction as well as by the much more strenuous requirements of concentrated packages (sometimes of considerable weight) and long and grinding hauls in the high speed transportation systems of the present day.

The simple form of the ordinary nail has been changed and modified so as to meet highly specialized requirements. Not only the length and gauge of the nail has been changed but the shape of the point and head have been altered, various types of barbing have been developed, as well as nails with double heads, capable of being driven to definite depths and then being readily withdrawn in order to re-use the lumber which was employed in these temporary structures such as shoreings and forms for concrete placement. Other types of nails are made headless or with very small heads with special fillister so as to draw in close as for flooring and trim nailing. The change in the types of roofing employed has made necessary the development of specially designed nails for each variety of roofing, some of which are not driven at all but are used to keep the sections or shingles flat and in alignment no matter what the weather conditions may be to which the roof is subjected. Other

nails in a wide array of sizes have been developed for the nailing of boxes, crates, and other containers, each intended for some special product. Not only the shape and size, however, have been altered, even the analysis of the steel has been made to conform to the requirements of the nail. Other metals besides steel have been adopted for highly specific purposes, hence we find nails made of solid copper, bronze, or brass and most recently the new corrosion resistant steels known as stainless. These latter employ alloys of Chromium and Nickel combined with steel to give nails properties hardly dreamed of only a decade ago. They are free from rusting even in strong brine solutions and most of the ordinary acids. These corrosion resisting properties are of particular interest to producers of containers for meats and other foods. The same is true of the construction of vats and flumes subjected to more or less corrosive liquids in storage or transit, and for maritime purposes. A nail that is properly selected for the work it is to do, will not split the wood, this splitting being determined by the shape of the point of the nail and the gauge and length as compared to the thickness and variety of the wood in which it is used.

All things being equal, the lighter gauges and lengths are the most economical to use as there are more nails to the pound. This, on large nailing operations, amounts to quite an item where a specified number of nails are to be used as in a box or crate.

There are, however, other factors besides economy which determine just what length and gauge of nail is to be employed.

The usefulness of any nail, regardless of size, depends on its "Holding Power" in any given variety of wood. To determine this "Holding Power" elaborate experiments and tests have been made by the Forest Service of the U. S. Dept. of Agriculture in co-operation with the University of Wisconsin at Madison. These tests have been carried on for a considerable period of time with apparatus designed especially for the purpose, thus standardizing the results and making it possible to plot the findings so as to obtain a true picture of the factors involved and their relation to each other. To summarize these findings briefly:

The holding power of a nail is dependent on the closeness of the fibers making up the wood in which the nail is used. This being the case there seems to be a definite relation between the holding power of the nail and the specific gravity based on volume and weight of oven dry wood. Green wood with a high moisture content has a higher holding power than dry wood.

The holding power of the nail decreases as the wood becomes aged if the nail was originally driven into green wood with high moisture content. Where the contact of the

wood fibers with the nail is chiefly end grain, a much higher holding power can be assumed than would be the case if such contact were chiefly side grain.

If the nail is originally driven into wood that has been properly seasoned, it is safe to assume that this holding power will increase with time. This is particularly true of the softer types of wood. The holding power of the nail is influenced by the surface of the nail, special coatings or treatments of this surface being capable of increasing the holding power from ten to forty percent over an untreated or plain nail.

The type of nail which causes the smallest amount of distortion in the fibres of the wood into which it is driven will have the greatest holding power.

Points of nails influence the holding power of a nail in direct proportion to the amount of distortion which they produce in the wood fibre. Blunt points penetrate the surface layers without splitting, but produce a maximum amount of fibre distortion in the deeper layers. Very sharp points and long diamond points favor splitting particularly in hard dense woods.

The ordinary nail with its moderately sharp point and short angles distorts wood fibres least and produces only a moderate amount of splitting.

Light weight woods which show little tendency to split can advantageously be nailed with sharp pointed nails thereby securing somewhat greater holding power. Denser species of wood which have greater splitting tendencies may offset all of the gain in holding power secured from a sharp point by this tendency to split, while the use of a very blunt point to overcome the splitting tendency may result in low holding power due to fiber distortion in the more interior layers of wood fibers.

All conditions being equal, a blunt tapered nail will give the best all around results as in the heavier woods it is fully equal in holding power to the common point nail with less splitting tendency while in the lighter woods it nearly equals the common point nail.

Light weight woods with relatively low nail holding power are just as suitable for certain purposes as are the heavier and denser grained woods as they offer the opportunity to use nails of larger diameter, greater length or increased numbers to compensate for the short-comings in the wood without danger of splitting.

Properly cement coated nails have approximately twice the holding power of plain untreated nails. The new acid etched nails have about 40% greater holding power than the best cement coated nails.

The average density and nail holding power of 51 species of wood, based on a 7d cement coated nail is shown in the following table:

Nail-Holding Power of Various Species of Wood

(7d Cement-Coated Nails Driven to a Depth of One and One-Quarter Inches and Pulled at Once)

Common and botanical name of species	Place of growth of material tested	Moisture content per cent	Specific gravity based on vol. and wt. of oven-dry wood	Average holding power for one nail when driven into		
				End surface pounds	Radial surface (iedge-grain) pounds	Tangential surface (iflat-grain) pounds
Ash, white (*Fraxinus americana*)	Ark.	8.9	0.64	385	455	452
Aspen (*Populus tremuloides*)	Colo., N. Mex., Wis.	5.3	.39	117	187	201
Aspen, largetooth (*Populus grandidentata*)	Wis.	6.5	.41	157	202	207
Basswood (*Tilia glabra*)	Pa.	6.5	.41	138	199	194
Beech (*Fagus grandifolia*)	Ind.	8.4	.67	358	495	460
Birch, yellow (*Betula lutea*)	Wis.	8.6	.66	331	473	451
Cedar, western red (*Thuja plicata*)	Mont., Wash.	7.6	.34	118	192	202
Cedar, northern white (*Thuja occidentalis*)	Wis.	9.3	.32	103	153	160
Chestnut (*Castanea dentata*)	Md., Tenn.	9.2	.45	172	258	273
Cottonwood, black (*Populus trichocarpa*)	Wash.	5.9	.37	122	194	196
Cottonwood, eastern (*Populus deltoides*)		6.8	.34	143	189	197
Cypress, southern (*Taxodium distichum*)	La., Mo.	8.3	.47	144	266	291
Douglas fir (*Pseudotsuga taxifolia*)	Ore., Wash.	6.3	.51	183	273	296
Elm, American (*Ulmus americana*)	Pa.	8.2	.54	236	344	339
Fir, California red (*Abies magnifica*)	Calif.	9.0	.37	100	177	189
Fir, silver (*Abies amabilis*)	Wash.	4.9	.40	86	201	207
Fir, white (*Abies concolor*)	Calif.	8.0	.41	104	176	203
Fir, lowland white (*Abies grandis*)	Idaho	5.3	.36	60	150	182
Gum, red (*Liquidambar styraciflua*)	Ark.	8.3	.51	192	292	278
Gum, tupelo (*Nyssa aquatica*)	La., Mo.	9.3	.52	233	376	345
Hemlock, eastern (*Tsuga canadensis*)	Tenn., Wis.	8.9	.42	127	225	230
Hemlock, western (*Tsuga heterophylla*)	Wash.	6.7	.46	149	266	277
Hop-hornbeam (*Ostrya virginiana*)	Wis.	6.5	.76	457	513	480
Larch, western (*Larix occidentalis*)	Idaho	4.4	.58	180	299	319
Locust, black (*Robinia pseudoacacia*)	Tenn.	4.1	.71	404	461	345

Locust, honey (*Gleditsia triacanthos*)	Ind.	6.5	.76	431	508	449
Magnolia, cucumber (*Magnolia acuminata*)	Tenn.	5.1	.52	233	350	335
Maple, black (*Acer nigrum*)	Ind.	9.8	.62	357	480	415
Maple, silver (*Acer saccharinum*)	Wis.	6.8	.51	280	333	338
Maple, sugar (*Acer saccharum*)	Ind.	9.2	.65	396	497	459
Oak, red (*Quercus borealis*)	Ark., Tenn., N. H.	8.4	.66	312	466	422
Oak, white (*Quercus alba*)	Ark., La.	8.6	.72	320	496	444.
Pine, jack (*Pinus banksiana*)	Wis.	7.6	.46	161	228	272
Pine, loblolly (*Pinus taeda*)	Fla.	8.0	.59	179	271	335
Pine, lodgepole (*Pinus contorta*)	Colo., Idaho	6.3	.44	141	244	252
Pine, longleaf (*Pinus palustris*)	Fla., La., Miss.	7.7	.64	244	362	376
Pine, mountain (*Pinus pungens*)	Tenn.	7.1	.55	209	318	330
Pine, Norway (*Pinus resinosa*)	Wis.	7.4	.51	165	273	282
Pine, pitch (*Pinus rigida*)	Tenn.	7.7	.54	235	325	330
Pine, pond (*Pinus rigida serotina*)	Fla.	7.5	.57	211	348	384
Pine, shortleaf (*Pinus echinata*)	La.	7.2	.58	235	331	377
Pine, slash (*Pinus caribea*)	Fla.	7.6	.68	290	356	420
Pine, northern white (*Pinus strobus*)	Wis.	7.7	.39	136	220	225
Pine, western white (*Pinus monticola*)	Mont.	8.2	.45	134	255	246
Pine, western yellow (*Pinus ponderosa*)	Calif., Oreg.	6.6	.44	122	224	233
Poplar, yellow (*Liriodendron tulipifera*)	Tenn.	7.3	.42	162	212	223
Spruce, Engelmann (*Picea engelmannii*)	Colo.	9.4	.36	136	177	184
Spruce, red (*Picea rubra*)	Tenn.	10.7	.41	148	229	221
Spruce, white (*Picea glauca*)	Wis.	7.6	.43	146	209	218
Sycamore (*Platanus occidentalis*)	Tenn.	7.0	.55	270	369	349
Redwood (*Sequoia sempervirens*)	Calif.	6.0	.42	106	221	226

The nail-holding properties of wood are in general closely related to the specific gravity or density of the material but species characteristics may, however, account for variations, of as much as 25 per cent in these relations. Since in any species there is variation in specific gravity, the nail-holding properties of individual pieces may vary considerably from the averages. Hence it is possible to select material of any species that is relatively high in nail-holding properties and is better than the average.

MANUAL

of

CARPENTRY

SECTION

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Manual of Carpentry

Wire Nails—Kinds and Quantities Required

Length, in inches	Am. Steel & Wire Co.'s Steel Wire Gauge	Approx. No. to lbs.	Nailings	Sizes and Kinds of Material	Trade Names	Pounds per 1000 feet B. M. on center as follows: 12″	16″	20″	36″	48″
						Pounds				
2½	10¼	106	2	I. Used square edge, as platforms, floors, sheathing, or shiplap. 1 x 4	8d common	60	48	37	23	20
2½	10¼	106	2	1 x 6	8d common	40	32	25	16	13
2½	10¼	106	2	1 x 8	8d common	31	27	20	12	10
2½	10¼	106	2	1 x 10	8d common	25	20	16	10	8
2½	10¼	106	3	1 x 12	8d common	31	24	20	12	10
4	6	31	2	II. When used D. & M., blind nailed, only ½ quantity named required. 2 x 4	20d common	105	80	65	60	33
4	6	31	2	2 x 6	20d common	70	54	43	27	22
4	6	31	2	2 x 8	20d common	53	40	53	21	17
4	6	31	3	2 x 10	20d common	60	50	40	25	20
4	6	31	3	2 x 12	20d common	52	41	33	21	17
6	2	11	2	3 x 4	60d common	197	150	122	76	61
6	2	11	2	3 x 6	60d common	131	97	82	52	42
6	2	11	2	3 x 8	60d common	100	76	61	38	34
6	2	11	3	3 x 10	60d common	178	137	110	70	55
6	2	11	3	3 x 12	60d common	145	115	92	58	46
2½	12½	189	2	Base, per 100 ft. lin.	8d finish	.....	1	.....	.....	.....
2½	10¼	106	2	Byrket lath	8d common	.....	48	.....	.....	.....

Wire Nails—Kind and Quantities Required—Cont.

Length, in inches	Am. Steel & Wire Co.'s Steel Wire Gauge	Approx. No. to lbs.	Nailings	Sizes and Kinds of Material	Trade Names	Pounds per 1000 feet B. M. on center as follows: 12″	16″	20″	36″	48″
						Pounds				
2½	12½	189	1	Ceiling, ¾ x 4	8d finish	18	14			
2	13	309	1	Ceiling, ½ and ⅝	6d finish	11	8			
2½	12½	189	2	Finish, ⅞	8d finish	25	12			
3	11½	121	2	Finish, 1⅛	10d finish	12	10			
2½	10	99	1	Flooring, 1 x 3	8d floor brads	42	32			
2½	10	99	1	Flooring, 1 x 4	8d floor brads	32	26			
2½	10	99	1	Flooring, 1 x 6	8d floor brads	22	18			
4	6	31		Framing, 2x4 to 2x16	20d common	20	16	14		
3½	8	49		requires 3 or more	16d common	10	10	8		
3	9	69		sizes and vary greatly	10d common	8	6	5		
6	2	11		Framing, 3x4 to 3x14	60d common	30	25	20		
2½	11½	145	2	Siding, drop, 1 x 4	8d casing or 7d Siding Nails	45	35			
2½	11½	145	2	Siding, drop, 1 x 6	8d casing or 7d Siding Nails	30	25			
2½	11½	145	2	Siding, drop, 1 x 8	8d casing or 7d Siding Nails	23	18			
2	13	309	1	Siding, bevel, ½ x 4	6d finish or 7d Siding Nails	23	18			
2	13	309	1	Siding, bevel, ½ x 6	6d finish or 7d Siding Nails	15	13			
2	13	309	1	Siding, bevel, ½ x 8	6d finish or 7d Siding Nails	12	10			
				Casing, per opening	6d and 8d casing	About ½ pound per side.				

Wire Nails—Kinds and Quantities Required—Cont.

1¼	14	568	12″ o.c.	Flooring, ⅜ x 2....	3d brads.....	About 10 pounds per 1000 square feet.
1⅛	15	778	16″ o.c.	Lath, 48″.....	3d sterilized blued lath.....	6 pounds per 1000 pieces.
⅞	12	469	2″ o.c.	Ready roofing.....	Barbed roofing.....	¾ of a pound to the square.
⅞	12	469	1″ o.c.	Ready roofing.....	Barbed roofing.....	1½ pounds to the square.
⅞	12	180	2″ o.c.	Ready roofing..... (⅝ heads)	American felt roofing	1½ pounds to the square.
⅞	12	180	1″ o.c.	Ready roofing..... (⅝ heads)	American felt roofing	3 pounds to the square.
1¼	13	429	....	Shingles†.....	3d shingle.....	4½ pounds; about 2 nails to each 4 inches.
1½	12	274	....	Shingles.....	4d shingle.....	7½ pounds; about 2 nails to each 4 inches.
⅞	12	180	4	Shingles.....	American felt roofing	12 lbs., 4 nails to shingle.
⅞	12	469	4	Shingles.....	Barbed roofing.....	4½ lbs., 4 nails to shingle.
1	16	1150	2″ o.c.	Wall board, around entire edge.....	Plaster board nails flat head.....	5 pounds, per 1,000 square feet.
1	15½	1010	3″ o.c.	Wall board, intermediate nailings..	2d	2½ lbs., per 1.000 square feet.

†Wood shingles vary in width; asphalt are usually 8 inches wide. Regardless of width 1000 shingles are the equivalent of 1000 pieces 4 inches wide.

The "Penny" System

The "penny" system of designating nails originated in England. Two explanations are offered as to how this curious designation came about. One is that the six penny, four penny, tenpenny, etc., nails derived their names from the fact that one hundred cost sixpence, fourpence, etc. The other explanation, which is more probable, is that one thousand tenpenny nails, for instance, weighed ten pounds. The ancient as well as modern abbreviation for penny is "d," being first letter of the Roman coin denarius; the same abbreviation in early history was used for the English pound in weight. At any rate, the penny has persisted as a term in the nail industry.

Strength of Joists

The table herewith has been carefully calculated by this formula:

$$\text{Safe load} = \frac{2 \times \text{thickness} \times \text{square of width} \times A}{\text{Span in feet}}$$

in which the value of A is 1-18 of the fiber strain or modulus of rupture for safe loads. It is the formula used in modern construction by P. E. Kidder and other noted civil engineers.

Its Use

What size joists are required in a hay bay 20 feet wide, 40 feet long and 12 feet high, the joists being supported at the ends only? The cubic contents = 20 x 40 x 12 or 9,600 cubic feet. At 512 cubic feet to the ton this bay will hold 18¾ tons or 37,500 pounds. Supposing the joists to be set 24" on centers there would be 21 joists and each would have to carry 1-21 of 37,500 pounds or 1785 5-7 pounds. Referring to the table the safe load for 1 x 1020 is 1000 pounds. This multiplied by 1¾" the exact thickness of the joists = 1750 pounds, whereas provision must be made for 1785 pounds; therefore 3 x 10's must be used or the 2 x 10's must be set closer than 2 feet on centers.

Economy

It also indicates the economical sizes to give best results. For example, the safe load for a 4 x 4 16 is 800 pounds (4 x 200) while the safe load for a 2 x 6 is 900 pounds (2 x 450), showing that while the 2 x 6 contains much less material, yet when used on edge it is ⅛ stronger than the 4 x 4.

Safe Quiescent Loads Uniformly Distributed for Long Leaf Yellow Pine

Set on edge and supported at both ends. Multiply weight given by exact thickness of joists used.

Safe Quiescent Loads Uniformly Distributed for Long Leaf Yellow Pine

Size						Size				
1x4	1x6	1x7	1x8	1x9	Span in ft.	1x10	1x12	1x14	1x15	1x16
Safe Load Pounds						Safe Load Pounds				
533	1200	1633	2133	2700	6	3333	4800	6533	7500	8533
400	900	1225	1600	2025	8	2500	3600	4900	5633	6400
320	720	980	1280	1620	10	2000	2880	3920	4500	5120
267	600	816	1066	1350	12	1666	2400	3266	3750	4266
228	514	700	914	1157	14	1428	2056	2800	3214	3656
213	480	653	853	1080	15	1333	1920	2613	3000	3412
200	450	612	800	1012	16	1250	1800	2450	2816	3200
188	423	576	753	953	17	1176	1694	2306	2653	3012
178	400	544	711	900	18	1111	1600	2177	2500	2844
160	360	490	640	810	20	1000	1440	1960	2250	2560
145	327	445	582	736	22	909	1309	1782	2045	2327
139	313	426	556	704	23	869	1252	1704	1956	2226
133	300	408	533	675	24	833	1200	1633	1875	2133
128	288	392	512	648	25	800	1152	1568	1800	2048
123	277	377	492	623	26	769	1107	1507	1730	1969
119	267	363	474	600	27	740	1066	1451	1666	1896
114	257	350	457	578	28	714	1028	1400	1607	1828
107	240	326	426	540	30	667	960	1306	1500	1706
100	225	306	400	506	32	625	900	1225	1406	1600
			376	476	34	588	847	1153	1323	1506
			355	450	36	555	800	1088	1250	1422
			337	426	38	526	757	1031	1184	1347
			320	405	40	500	720	980	1125	1280

☞The safe loads estimated are for *clear* pieces and *full* sizes. On account of scant sizes and more or less defective stock, an allowance of 20 per cent must be made. For example, the safe load for a 1 x 8-8 is 1600 pounds, and for a 2 x 8-8 two times this or 3200 pounds. But for reasons stated 20 per cent must be deducted, reducing the safe load of a 2 x 8-8 to 2560 pounds.

The safe load for fir is 90 per cent of above long leaf yellow pine, for white oak 75 per cent; for short leaf yellow pine and Norway pine 70 per cent; hemlock 65 per cent; white pine 60 per cent; spruce 70 per cent; cast iron 222 per cent; wrought iron 666 per cent, and medium steel 888 per cent.

I. When the load is concentrated midway between the supports, take only half of above load.

II. For beams fixed at one end the other unsupported and the load uniformly distributed takes one-fourth of above loads, if the load is concentrated on the unsupported end, then take only one-eighth of above.

III. In the above, the safe load includes the weight of the joists, which must be deducted to get the net or superimposed safe load.

IV. Joists longer than 12 times their width used without intermediate supports are apt to crack plastered ceilings.

Safe Loads for Long Leaf Yellow Pine and Fir Columns Standing Plumb, Supported at the Ends Only

Length of Post, Feet				Size of Post	Length of Post, Feet			
8	10	12	14		16	18	20	22
Pounds				Inches	Pounds			
12160	11200	10240	9280	4x4	8320	7360	6400	5440
18200	16800	15360	12920	4x6	12480	11040	9600	8160
19500	18760	17550	16500	5½ diam. round	15460	14416	13395	12350
30200	28800	27400	25900	6x6	24500	23040	21600	20160
40300	38400	36500	34600	6x8	32600	30720	28800	26880
50400	48000	45600	43200	6x10	40800	38400	36000	33600
38540	37130	35710	34300	7½ diam. round	32890	31450	30035	28622
64000	54400	52500	50600	8x8	48600	46700	44800	42880
80000	68000	65600	63200	8x10	60800	58400	56000	53600
96000	81600	78700	76800	8x12	73000	70100	67200	64320
70900	61970	60190	58350	9½ diam. round	56580	54800	53018	51175
100000	100000	85600	83200	10x10	80800	78400	76000	73600
120000	120000	102700	99800	10x12	97000	94100	91200	88320
140000	140000	119800	116500	10x14	113100	109800	106400	103040
103900	103900	90912	88730	11½ diam. round	86550	84160	82290	79972
144000	144000	144000	123800	12x12	121000	118100	115200	109440
168000	168000	168000	144500	12x14	141100	137800	134400	127680
192000	192000	192000	165100	12x16	161300	157400	153600	145920
196000	196000	196000	196000	14x14	169100	165800	162400	155800
256000	256000	256000	256000	16x16	225300	221400	217600	209900
324000	324000	324000	324000	18x18	289400	285100	280800	272160
400000	400000	400000	400000	20x20	400000	356800	352000	342400

On the previous page are results of full size columns tested at the United States arsenal at Watertown, Mass., by James H. Stanwod, who is instructor in civil engineering at Massachusetts Institute of Technology, as quoted by Frank E. Kidder in his "Architect's Pocket-Book." The table is based on the following formula:

Safe load per *square inch* of cross section =

$$1000 - \left(10 \times \frac{\text{length in inches}}{\text{breadth in inches}}\right)$$

Other woods gave the following, to-wit:

Short leaf yellow pine:

Safe load per *square inch* of cross section =

$$850 - \left(8.5 \times \frac{\text{length in inches}}{\text{breadth in inches}}\right)$$

Oak and Norway pine:

Safe load per *square inch* of cross section =

$$750 - \left(7.5 \times \frac{\text{length in inches}}{\text{breadth in inches}}\right)$$

White pine and spruce:

Safe load per *square inch* of cross section =

$$625 - \left(6 \times \frac{\text{length in inches}}{\text{breadth in inches}}\right)$$

For the breadth use shortest side, *i.e.*, in a 4 x 6 the breadth is 4 inches. The results from above equasions multiplied by area of cross section give the safe load in pounds.

How to Figure Lumber

Board Measure

Lumber is usually reckoned by Board Measures, the unit being a square foot one inch thick.

Lumber less than one inch thick is usually figured as of one inch.

The ordinary way of finding the contents of squared lumber is to multiply together the length in feet, the width and thickness in inches and divide the product by 12.

Figuring lumber by the above rule is a slow process, and the following system is adopted by experts whose business makes rapid calculation essential to their success.

Multiply together the thickness and width in inches, divide the product by 12 and multiply result by the length; the answer is Board Measure contents.

Examples

A few examples will show the system for finding the contents of standard sizes in a few seconds and many of them without a moment's hesitation.

Example: Find the Board Measure contents of the following sizes:

Pcs.	Size	Length	B. M.
1	2x 8 inches	30 feet	40
1	4x10 inches	18 feet	60
1	10x10 inches	36 feet	300
1	20x20 inches	60 feet	2000

Operation

2x8 equals 16 divided by 12 equals 16/12 or 1⅓. When this is multiplied by the length the answer is 40 feet; in other words, add one-third to the length and you have the Board Measure contents.

Operation

4x10 equals 40 divided by 12 equals 3⅓ or 10/3. In this instance a cipher is added to the length and when this is divided by three the result is 60 feet Board Measure contents.

10x10 equals 100; this divided by 12 equals 8⅓, or 100/12. It is easier to multiply by 100 and divide by 12 than to multiply by 8⅓, therefore add two ciphers to the length and divide by 12; the result is 300 feet Board Measure contents.

20x20 equals 400, divided by 12 equals 33⅓, or 100/3. All that is necessary is to add two ciphers to the length and divide by 3; the result is 2000 feet, Board Measure contents.

After a short reflection on the above method, it will be apparent to everyone that when this system is used I have made good my statement that the contents of any ordinary stick of lumber can be figured inside of a few seconds.

The following standard sizes and multiples for same will serve as a basis for practice, and when memorized will benefit those who wish to become rapid in figuring lumber, and at the same time may prove a stepping stone to a better position and successful career.

Standard Sizes and Multiples

1 x 3	Divide lineal feet by 4.
1 x 4	Divide lineal feet by 3.
1 x 6	Divide lineal feet by 2.
1 x 8	Multiply lineal feet by 2 and divide by 3.
1 x10	Multiply lineal feet by 10 and divide by 12.
1 x12	Lineal feet and Board Measure the same.
2 x 3	Divide lineal feet by 2.
2 x 4	Multiply lineal feet by 2 and divide by 3.
2 x 8	Add to lineal feet ⅓ of amount.
2 x10	Multiply lineal feet by 10 and divide by 6.
2 x12	Multiply lineal feet by 2.
3 x 3	Multiply lineal feet by 3 and divide by 4.
3 x 4	Lineal feet and Board Measure the same.
3 x 6	Add to lineal feet ½ the amount.
3 x 8	Multiply lineal feet by 2.
3 x10	Multiply lineal feet by 10 and divide by 4.
3 x12	Multiply lineal feet by 3.
4 x 4	Add to lineal feet ⅓ of amount
4 x 6	Multiply lineal feet by 2.
4 x 8	Multiply lineal feet by 3 and subtract ⅓ lineal feet from amount.
4 x10	Multiply lineal feet by 10 and divide by 3.
4 x12	Multiply lineal feet by 4.
8 x 8	Multiply lineal feet by 5⅓.
10x10	Multiply lineal feet by 100 and divide by 12.
12x12	Multiply lineal feet by 12.
14x14	Multiply lineal feet by 16⅓.
16x16	Multiply lineal feet by 21⅓.
18x18	Multiply lineal feet by 27.
20x20	Multiply lineal feet by 100 and divide by 3.
22x22	Multiply lineal feet by 40⅓.
24x24	Multiply lineal feet by 48.

Another Method

A handy method for computing Board Measure contents preferred by a number of lumbermen is as follows: For all 12 ft. lengths multiply width by thickness.

For all 14 ft. lengths multiply width by thickness and add 1/6.

For all 16 ft. lengths multiply width by thickness and add 1/3.

For all 18 ft. lengths multiply width by thickness and add 1/2.

For all 20 ft. lengths multiply width by thickness and add 2/3.

For all 22 ft. lengths multiply width by thickness and add 5/6.

For all 24 ft. lengths multiply width by thickness and double.

Some objection may be taken to the use of 2/3 and 5/6, but often by transposition you can substitute 1/6, 1/3 or 1/2 as in the following:

Examples:

10 pcs. 1x18—22 changed to 10 pcs. 1x22—18.
16 pcs. 1x22—20 changed to 20 pcs. 1x22—16.

In the first example instead of multiplying 10x18 and adding 5/6 to the result, multiply 10x22 and add one-half to the result, which will give 330 ft. Board Measure. In the second item instead of multiplying 16x22 and adding 2/3 multiply 20x22 and add 1/3 which gives 586⅔ ft. Board Measure.

The above system is very handy when figuring lumber from 12 to 24 feet in length and also where odd widths and thicknesses frequently occur.

To Convert Board Measure to Lineal Feet, simply reverse the multiple used to bring lineal feet to Board Measure; in other words, multiply Board feet by 12 and divide by thickness and width.

Example: How many lineal feet are there in 1000 feet Board Measure of 2x8?

Process:

1000
12
2) 12000
8) 6000
750 lineal feet. Answer.

Car orders frequently call for a specified amount of sizes containing special lengths. Before proceeding to load it is necessary to find the number of pieces required.

Find the number of pieces in the following order:

1000 ft. B. M. 2x4-14.
1000 ft. B. M. 2x4-16.
1000 ft. B. M. 2x4-20.

Bring the Board Measure to lineal feet as shown in previous example, then divide the length into lineal feet. The result will be the number of pieces.

Process:

1000
12

2) 12000

4) 6000

1500 lineal feet.

The lineal feet given is now divided by the respective lengths and the following answer is obtained:

107 Pcs. 2x4—14	containing	998 ft. 8 in. B. M.
94 Pcs. 2x4—16	containing	1002 ft. 8 in. B. M.
75 Pcs. 2x4—20	containing	1000 ft. B. M.
276		3001 ft. 4 in. B. M.

FIGURING SQUARE TIMBERS

This method of computing the Board Measure contents of square or rectangular timbers that exceed 12 inches one or both ways, is known to but very few, if any, lumbermen. It is a rapid way of figuring the majority of sizes, and on account of its simplicity the system is easily committed to memory.

Depreciation

FRAME				The Constituent Parts of Buildings	BRICK, Shingle Roofs			
Stores		Dwellings			Dwellings		Stores	
Average Duration	Depreciation per Year	Average Duration	Depreciation per Year		Average Duration	Depreciation per Year	Average Duration	Depreciation per Year
Years	%	Years	%		Years	%	Years	%
30	3⅓	40	2½	Base	40	2½	30	3⅓
..	....	..	....	Brick	75	1⅓	66	1½
30	3⅓	40	2½	Cornice	40	2½	40	2½
40	2½	50	2	Dimension lumber	75	1⅓	66	1⅓
25	4	30	3⅓	Doors and trim	30	3⅓	30	3⅓
13	8	20	5	Floors	20	5	13	8
13	8	20	5	Hardware	13	8	20	5
30	3⅓	30	3⅓	Inside blinds	30	3⅓	30	3⅓
16	6	16	6	Outside blinds	16	6	16	6
5	20	7	14	Paint, inside	7	14	6	16
5	20	5	20	Paint, outside	7	14	6	16
16	6	20	5	Plaster	30	3⅓	30	3⅓
20	5	20	5	Porches	20	5	20	5
16	6	16	6	Shingles of wood	16	6	16	6
40	2½	50	2	Sheathing	50	2	50	2
30	3⅓	30	3⅓	Siding	..	....	..	....
25	4	25	4	Sills and first floor joists	40	2½	30	3⅓
20	5	30	3⅓	Stairs	30	3⅓	20	5
25	4	30	3⅓	Windows	30	3⅓	30	3⅓

The facts in the above table were compiled by Mr. A. W. Spaulding for the Fire Underwriters' Association of the Northwest. Mr. Spaulding's investigation covered twenty-seven cities and towns in eleven western states, and it is believed that the table is as accurate as it is possible to produce. This Actuary table will enable lumbermen to pass upon the value of the constituent parts of any kind of building.

How to Make Blue Prints

The paper, which may be bought ready for use, should be stored in a dry place and be entirely shielded from the sunlight until used.

1. Provide a smooth board as large as the tracing to be copied.

2. Lay on this two or three thicknesses of common blanket to give a slightly yielding backing for the paper.

3. Lay on the blanket the prepared paper with the sensitive side up.

4. Lay on the paper the tracing, smoothing it out as perfectly as possible to insure perfect contact with the paper.

5. Lay on the tracing a piece of clear plate glass, which should be heavy enough to press the tracing close down upon the paper.

6. Expose the whole to a clear sunlight from six to ten minutes. If a clear sky can be had, the exposure must be continued from thirty to forty-five minutes, and under a cloudy sky sixty to ninety minutes.

7. Remove the prepared paper and drench it in clear water, and hang it up by one corner to dry.

The paper is of a full yellow or bronze color. After the exposure to the light the surface becomes a darker bronze and the lines of the tracing appear still darker on the surface. Upon washing the paper the characteristic blue tints appear with the white lines of the tracing in vivid contrast.

Rafters and Gables

Width of Building	Fourth Pitch				Area of Two Gables	Third Pitch				Area of Two Gables	Half Pitch				Area of Two Gables
	Length of Rafter		From Plate to Comb			Length of Rafter		From Plate to Comb			Length of Rafter		From Plate to Comb		
	ft.	in.	ft.	in.		ft.	in.	ft.	in.		ft.	in.	ft.	in.	
6	3	4	1	6	9	3	7	2	0	12	4	3	3	0	18
7	3	11	1	9	12	4	0	2	4	16	5	0	3	6	25
8	4	6	2	0	16	4	10	2	8	21	5	8	4	0	32
9	5	0	2	3	20	5	5	3	0	27	6	5	4	6	41
10	5	7	2	6	25	6	0	3	4	33	7	1	5	0	50
12	6	8	3	0	36	7	2	4	0	48	8	6	6	0	72
14	7	10	3	6	49	8	5	4	8	65	9	11	7	0	98
16	9	0	4	0	64	9	7	5	4	85	11	4	8	0	128
18	10	1	4	6	81	10	10	6	0	108	12	9	9	0	162
20	11	2	5	0	100	12	0	6	8	133	14	2	10	0	200
22	12	4	5	6	121	13	2	7	4	161	15	7	11	0	242
24	13	5	6	0	144	14	5	8	0	192	17	0	12	0	288
26	14	6	6	6	169	15	7	8	8	225	18	6	13	0	338
28	15	8	7	0	196	16	10	9	4	261	19	11	14	0	392
30	16	9	7	6	225	18	0	10	0	300	21	4	15	0	450
32	17	11	8	0	256	19	2	10	8	341	22	9	16	0	512

To the lengths of rafters above given must be added the desired projection for cornice. Add also to make stock lengths.

For length of rafter on one-way roofs, take the rafter given for double the width thus: The rafter for a one-way roof on a building 10 feet wide, 4th pitch is that given for 20 feet wide or 11 feet, 2 inches.

In area of gable above given no allowance is made for waste or laps.

To verify above or obtain length of rafters for buildings of other widths than above given multiply the width of building by .559 for 4th pitch; by .6 for 3d pitch and by .71 for half pitch.

Capacity, in bushels, of cribs or bins, each Eight feet high in the clear

WIDTH						WIDTH				
3	8	10	12	14	Length	16	18	22	26	30
BUSHELS						BUSHELS				
77	206	257	309	360	**4**	411	463	566	669	771
96	257	321	386	450	**5**	514	579	707	836	964
116	309	386	463	540	**6**	617	694	849	1003	1157
135	360	450	540	630	**7**	720	810	990	1170	1350
154	411	514	617	720	**8**	823	926	1131	1337	1543
174	463	579	694	810	**9**	926	1041	1273	1504	1736
193	514	643	771	900	**10**	1029	1157	1414	1671	1928
231	617	771	926	1080	**12**	1234	1388	1697	2006	2314
270	720	890	1080	1260	**14**	1440	1620	1980	2340	2700
309	823	1029	1234	1440	**16**	1646	1851	2263	2674	3086
347	926	1157	1388	1620	**18**	1851	2083	2546	3008	3471
386	1029	1286	1543	1800	**20**	2057	2314	2828	3343	3857
424	1131	1414	1697	1980	**22**	2263	2546	3111	3677	4243
463	1233	1543	1851	2160	**24**	2468	2777	3394	4011	4628
501	1337	1671	2006	2340	**26**	2674	3008	3677	4345	5014
540	1440	1800	2160	2520	**28**	2880	3240	3960	4680	5400
579	1543	1928	2314	2700	**30**	3086	3471	4243	5014	5785
617	1646	2057	2468	2880	**32**	3291	3703	4525	5348	6171

How large a bin shall I build to hold 800 bushels? is a very common question. To answer this and similar ones instantly is the object of above table, thus: How long a bin 8 feet wide and 8 feet high is required to hold 800 bushels of oats? Run down the 8-foot column until 823, the nearest amount to 800 bushels, is reached, and opposite, in the center column headed length, is 16, the length required.

For ear corn divide above quantities by 2; *i.e.*, a bin 8x8x16 will hold only 411 bushels ear corn.

For bins 10 feet high add ¼ to above.

Area of Openings

WIDE 22″ 1′ 10″	24″ 2′ 0″	26″ 2′ 2″	28″ 2′ 4″	HIGH	WIDE 30″ 2′ 6″	32″ 2′ 8″	34″ 2′ 10″	36″ 3′ 0″
SQUARE FEET					SQUARE FEET			
3.67	4.00	4.33	4.67	24″=2′ 0″	5.00	5.33	5.67	6.00
3.82	4.17	4.51	4.86	25″=2′ 1″	5.21	5.56	5.90	6.25
3.97	4.33	4.69	5.06	26″=2′ 2″	5.42	5.78	6.14	6.50
4.12	4.50	4.87	5.25	27″=2′ 3″	5.62	6.00	6.37	6.75
4.28	4.67	5.05	5.44	28″=2′ 4″	5.83	6.22	6.61	7.00
4.43	4.83	5.24	5.64	29″=2′ 5″	6.04	6.44	6.85	7.25
4.58	5.00	5.42	5.83	30″=2′ 6″	6.25	6.67	7.08	7.50
4.74	5.17	5.60	6.03	31″=2′ 7″	6.46	6.89	7.32	7.75
4.89	5.33	5.78	6.22	32″=2′ 8″	6.67	7.11	7.55	8.00
5.04	5.50	5.96	6.42	33″=2′ 9″	6.87	7.33	7.79	8.25
5.19	5.67	6.14	6.61	34″=2′ 10″	7.08	7.55	8.03	8.50
5.35	5.83	6.32	6.80	35″=2′ 11″	7.29	7.78	8.26	8.75
5.50	6.00	6.50	7.00	36″=3′ 0″	7.50	8.00	8.50	9.00
5.65	6.17	6.68	7.19	37″=3′ 1″	7.71	8.22	8.73	9.25
5.80	6.33	6.86	7.39	38″=3′ 2″	7.91	8.44	8.97	9.50
5.96	6.50	7.04	7.58	39″=3′ 3″	8.12	8.66	9.21	9.75
6.11	6.67	7.22	7.78	40″=3′ 4″	8.33	8.89	9.44	10.00
6.26	6.83	7.40	7.97	41″=3′ 5″	8.54	9.11	9.68	10.25
6.42	7.00	7.58	8.16	42″=3′ 6″	8.75	9.33	9.91	10.50
6.57	7.17	7.76	8.36	43″=3′ 7″	8.96	9.55	10.15	10.75
6.72	7.33	7.94	8.55	44″=3′ 8″	9.16	9.77	10.39	11.00
6.87	7.50	8.12	8.75	45″=3′ 9″	9.37	10.00	10.62	11.25
7.03	7.67	8.30	8.94	46″=3′ 10″	9.58	10.22	10.86	11.50
7.18	7.83	8.40	9.14	47″=3′ 11″	9.79	10.44	11.09	11.75
7.33	8.00	8.66	9.33	48″=4′ 0″	10.00	10.66	11.33	12.00

Area of Opening—Cont.

WIDE					WIDE			
22″ 1′ 10″	24″ 2′ 0″	26″ 2′ 2″	28″ 2′ 4″	HIGH	30″ 2′ 6″	32″ 2′ 8″	34″ 2′ 10″	36″ 3′ 0″
SQUARE FEET					SQUARE FEET			
7.48	8.17	8.84	9.52	49″=4′ 1″	10.21	10.88	11.57	12.25
7.64	8.33	9.02	9.72	50″=4′ 2″	10.41	11.11	11.80	12.50
7.79	8.50	9.20	9.91	51″=4′ 3″	10.62	11.33	12.04	12.75
7.94	8.66	9.38	10.11	52″=4′ 4″	10.83	11.55	12.27	13.00
8.09	8.83	9.56	10.30	53″=4′ 5″	11.04	11.77	12.51	13.25
8.25	9.00	9.75	10.50	54″=4′ 6″	11.25	11.99	12.75	13.50
8.40	9.16	9.93	10.69	55″=4′ 7″	11.45	12.22	12.98	13.75
8.55	9.33	10.11	10.88	56″=4′ 8″	11.66	12.44	13.22	14.00
8.71	9.50	10.29	11.06	57″=4′ 9″	11.87	12.66	13.45	14.25
8.86	9.66	10.47	11.27	58″=4′ 10″	12.08	12.88	13.69	14.50
9.01	9.83	10.65	11.47	59″=4′ 11″	12.29	13.10	13.93	14.75
9.16	10.00	10.83	11.66	60″=5′ 0″	12.50	13.33	14.16	15.00
9.32	10.16	11.01	11.86	61″=5′ 1″	12.70	13.55	14.40	15.25
9.47	10.33	11.19	12.05	62″=5′ 2″	12.91	13.77	14.63	15.50
9.62	10.50	11.37	12.24	63″=5′ 3″	13.12	13.99	14.87	15.75
9.77	10.66	11.55	12.44	64″=5′ 4″	13.33	14.21	15.11	16.00
9.93	10.83	11.73	12.63	65″=5′ 5″	13.54	14.44	15.34	16.25
10.08	11.00	11.91	12.83	66″=5′ 6″	13.74	14.66	15.58	16.50
10.23	11.16	12.09	13.02	67″=5′ 7″	13.95	14.88	15.81	16.75
10.39	11.33	12.27	13.22	68″=5′ 8″	14.16	15.10	16.05	17.00
10.54	11.50	12.45	13.41	69″=5′ 9″	14.37	15.32	16.29	17.25
10.69	11.66	12.63	13.60	70″=5′ 10″	14.58	15.55	16.52	17.50
10.84	11.83	12.81	13.80	71″=5′ 11″	14.79	15.77	16.76	17.75
11.00	12.00	13.00	14.00	72″=6 0″	15.00	16.00	17.00	18.00

Explanation—For the square feet in an opening 36 by 58 inches read in the 36-inch column opposite 58 in the center 14.50.

Roof Pitches

This diagram shows the three standard roof pitches that are used by all carpenters who put up buildings. But some good workmen are not sure of all the terms that are used to describe them.

Pitch means the angle or slant of the rafters in a straight line from the eaves to the peak of the roof.



Rise means the verticle elevation of the rafter at a given point. The term "rise" is always used in connection with the term "run." A roof rises a certain number of inches to each foot of the run.

Run is the horizontal measurement from the plate to the center line of the building.

Rise is the vertical climb of the rafter expressed in feet.

For example, the rise of a half pitch roof is equal to the run, which means that the distance from the plate to the center line of the building is the same as the distance from the center line to the peak. The rise of a one-quarter pitch roof is just half as much.

The Actuary Way to Figure Roof Spaces

The exact area of any roof, regardless of its shape, no matter how it may be cut up, is accurately determined as follows. Get the exact area from outside to outside of the walls on the level of the plates on which the rafters rest and add for the different roof pitches as follows:

One-fourth pitch add to area on square....12 per cent
One-third pitch add to area on square....20 per cent
One-half pitch add to area on square....42 per cent
Three-eighths pitch add to area on square.25 per cent
Five-eighths pitch add to area on square...60 per cent
Three-fourths pitch add to area on square.80 per cent

To the results thus obtained add the cornice projection all round. This gives the roof area sufficiently accurate for all practical purposes. For illustration, take a third pitch hip-roof—building 30 by 30 or 900 square feet at the square. Adding 20 per cent, or 180, gives 1080 as the roof area, including all dormers but excluding all cornice projections. Had there been a deck 5 by 6, or 30 square feet, then 30 plus 20 per cent should be deducted or 36 feet from 1080 = 1044 as the roof area, exclusive of deck and cornice projections.

Actuary's Estimate Tables

To Find Quantities of Lumber Required

STUDDING on 16 inch centers. Estimate one to the lineal foot. This allows for doubling at openings and at corners.

JOISTS AND RAFTERS on 16 inch centers. To ¾ of the length of the building add 1, thus: For a building 16x32, ¾ of 32 = 24, to which add 1, or 25, being the joists required, or the rafters for 1 side. Add 1 or 2 for each bearing partition.

ROOF SHEATHING LAID SOLID. To full area of roof add 10 per cent for waste. If laid 2 inches apart ¾ of above will be required.

ARTICLE	Count Width	Face Width	Loss in Matching	To area to be Covered Add
Shiplap.....	12 inch	11¼	7 %	1-12
"	10 "	9¼	8⅓ "	1-10
"	8 "	7¼	11 "	1-8
"	6 "	5¼	12½ "	1-5
Flooring.....	6 "	5¼	12½ "	1-5
"	4¼ "	3½	18 "	¼
"	4 "	3¼	19 "	¼
"	3 "	2¼	25 "	⅓
"	2¾ "	2	27 "	⅓
"	2½ "	2	20 "	¼
"	2 "	1½	25 "	⅓

Drop siding, ceiling, and partition same as above.

ARTICLE	Size	Exposed	To area to be Covered Add
Siding, beveled	½x4	3¼ inch	¼
" "	½x4	3 "	⅓
" "	½x4	2¾ "	½
" "	½x5	4¼ "	1-5
" "	½x5	4 "	¼
" "	½x5	3¾ "	⅓
" "	½x6	5¼ "	1-5
" "	½x6	5 "	9-40
" "	½x6	4¾ "	¼

SHINGLES

When exposed

4"	to the weather require	9 to the sq. ft.	Add 1-10 for Waste
4½"	" " " "	8 " " " "	
5"	" " " "	7⅕ " " " "	
5½"	" " " "	6½ " " " "	
6"	" " " "	6 " " " "	

CORNICES. Multiply the total lineal feet, by the combined width of planceer, frieze, and fascia thus: If the planceer is 12 inches, the frieze 8 inches, and the fascia 4 inches, the combined width is 24 inches or 2 feet b. m. to the lineal foot of cornice.

CORNER BOARDS AND OUTSIDE BASE. Estimate on same plan as cornices and then add ¼ if of 1¼ or ½ if of 1½ stuff.

BRIDGING. Multiply the total lineal feet, measuring each string in a straight line by the following:

For 2x6, 2x8 or 2x10	on 16 inch centers	by 2	
" 2x12	16 " "	" 2¼	
" 2x14	16 " "	" 2½	
" 2x6 and 2x8	12 " "	" 2	
" 2x10 and 2x12	12 " "	" 2¼	
" 2x14	12 " "	" 2⅔	

LATTICE

1⅛ wide	multiply area by	12	for lineal feet required.
1⅜ "	" "	10	" " "
1¾ "	" "	8	" " "

LATH

Lath when laid ⅜ inch apart, as for lime, require 1½ to the square foot, or 13½ to the square yard to which add 4% for waste, making practically 14 to the square yard. So to find the lath required increase the square feet to be lathed by ½ thus: 900 square feet require 900+½ of 900 or 1350 lath plus 4%=1404.

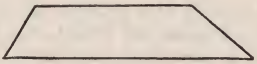
When laid ¼ inch apart, as for cement plasters, require 7 per cent more lath.

When there are no openings add 10 per cent to amount obtained by above.

Tapering Lumber

How to Figure Trapezoids, or Boards With Only Two Parallel Sides

Find the Board Measure contents of a board one inch thick, whose parallel sides are 16 feet and 20 feet in length and 8 inches wide.

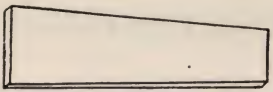


Add together the two parallel sides, and divide their sum by 2, multiply the result by the inches in width and divide by 12. The answer is 12 feet Board Measure contents:

Operation:

16
20
—
2) 36
—
18
8
—
12) 144
—
12 ft. Board Measure.

Find the Board Measure contents of a board one inch thick, 24 feet long whose parallel ends are 10 inches and 18 inches respectively.



Operation:

10
18
2) 28
14
24
12) 336
28 ft. Board Measure.

Square Feet in the Ceiling and Four Walls of Rooms

7-Foot Ceilings

FEET WIDE							FEET WIDE					
3	4	5	6	7	8	Feet Long	9	10	11	12	13	14
AREA SQUARE FEET							AREA SQUARE FEET					
93	110	127	144	161	178	3	195	212	229	246	263	280
110	128	146	164	182	200	4	218	236	254	272	290	308
127	146	165	184	203	222	5	241	260	279	298	317	336
144	164	184	204	224	244	6	264	284	304	324	344	364
161	182	203	224	245	266	7	287	308	329	350	371	392
178	200	222	244	266	288	8	310	332	354	376	398	420
195	218	241	264	287	310	9	333	356	379	402	425	448
212	236	260	284	308	332	10	356	380	404	428	452	476
229	254	279	304	329	354	11	379	404	429	454	479	594
246	272	298	324	350	376	12	402	428	454	480	506	532
263	290	317	344	371	398	13	425	452	479	506	533	560
280	308	336	364	392	420	14	448	476	504	532	560	588
297	326	355	384	413	442	15	471	500	529	558	587	616
314	344	374	404	434	464	16	494	524	554	584	614	644
331	362	393	424	455	486	17	517	548	579	610	641	672
348	380	412	444	476	508	18	540	572	604	636	668	700
365	398	431	464	497	530	19	563	596	629	662	695	728
382	416	450	484	518	552	20	586	620	654	688	722	756
399	434	469	504	539	574	21	609	644	679	714	749	784
416	452	488	524	560	596	22	632	668	704	740	776	812
433	470	507	544	581	618	23	655	692	729	766	803	840
450	488	526	564	602	640	24	678	716	754	792	830	868
467	506	545	584	623	662	25	701	740	779	818	857	896
484	524	564	604	644	684	26	724	764	804	844	884	924
501	542	583	624	665	706	27	747	788	829	870	911	952
518	560	602	644	686	728	28	770	812	854	896	938	980
535	578	621	664	707	750	29	793	836	879	922	965	1008
552	596	640	684	728	772	30	816	860	904	948	992	1036

Square Feet in the Ceiling and Four Walls of Rooms—Cont.

7-Foot Ceilings

FEET WIDE							FEET WIDE					
15	16	17	18	19	20	Feet Long	21	22	23	24	25	26
AREA SQUARE FEET							AREA SQUARE FEET					
297	314	331	348	365	382	3	399	416	433	450	467	484
326	344	362	380	398	416	4	434	452	470	488	506	524
355	374	393	412	431	450	5	469	488	507	526	545	564
384	404	424	444	464	484	6	504	524	544	564	584	604
413	434	455	476	497	518	7	539	560	581	602	623	644
442	464	486	508	530	552	8	574	596	618	640	662	684
471	494	517	540	563	586	9	609	632	655	678	701	724
500	524	548	572	596	620	10	644	668	692	716	740	764
529	554	579	604	629	654	11	679	704	729	754	779	804
558	584	610	636	662	688	12	714	740	766	792	818	844
587	614	641	668	695	722	15	749	776	803	830	857	884
616	644	672	700	728	756	14	784	812	840	868	896	924
645	674	703	732	761	790	15	819	848	877	906	935	964
674	704	734	764	794	824	16	854	884	914	944	974	1004
703	734	765	796	827	858	17	889	920	951	982	1013	1044
732	764	796	828	860	892	18	924	956	988	1020	1052	1084
761	794	827	860	893	926	19	959	992	1025	1058	1091	1124
790	824	858	892	926	960	20	994	1028	1062	1096	1130	1164
819	854	889	924	959	994	21	1029	1064	1099	1134	1169	1204
848	884	920	956	992	1028	22	1064	1100	1136	1172	1208	1244
877	914	951	988	1025	1062	23	1099	1136	1173	1210	1247	1284
906	944	982	1020	1058	1096	24	1134	1172	1210	1248	1286	1324
935	974	1013	1052	1091	1130	25	1169	1208	1247	1286	1325	1364
964	1004	1044	1084	1124	1164	26	1204	1244	1284	1324	1364	1404
993	1034	1075	1116	1157	1198	27	1239	1280	1321	1362	1403	1444
1022	1064	1106	1148	1190	1232	28	1274	1316	1358	1400	1442	1484
1051	1094	1137	1180	1223	1266	29	1309	1352	1395	1438	1481	1524
1080	1124	1168	1212	1256	1300	30	1344	1388	1432	1476	1520	1564

Explanation—For the total square feet in a room 20 feet wide and 30 feet long, ceiling 7 feet high, run down the 20-ft. column and opposite 30 read 1300 square feet.

Square Feet in the Ceiling and Four Walls of Rooms

8-Foot Ceilings

FEET WIDE							FEET WIDE					
3	4	5	6	7	8	Feet Long	9	10	11	12	13	14
AREA SQUARE FEET							AREA SQUARE FEET					
105	124	143	162	181	200	3	219	238	257	276	295	314
124	144	164	184	204	224	4	244	264	284	304	324	344
143	164	185	206	227	248	5	269	290	311	332	353	374
162	184	206	228	250	272	6	294	316	338	360	382	404
181	204	227	250	273	296	7	319	342	365	388	411	434
200	224	248	272	296	320	8	344	368	392	416	440	464
219	244	269	294	319	344	9	369	394	419	444	469	494
238	264	290	316	342	368	10	394	420	446	472	498	524
257	284	311	338	365	392	11	419	446	473	500	527	554
276	304	332	360	388	416	12	444	472	500	528	556	584
295	324	353	382	411	440	13	469	498	527	556	585	614
314	344	374	404	434	464	14	494	524	554	584	614	644
333	364	395	426	457	488	15	519	550	581	612	643	674
352	384	416	448	480	512	16	544	576	608	640	672	704
371	404	437	470	503	536	17	569	602	635	668	701	734
390	424	458	492	526	560	18	594	628	662	696	730	764
409	444	479	514	549	584	19	619	654	689	724	759	794
428	464	500	536	572	608	20	644	680	716	752	788	824
447	484	521	558	595	632	21	669	706	743	780	817	854
466	504	542	580	618	656	22	694	732	770	808	846	884
485	524	563	602	641	680	23	719	758	797	836	875	914
504	544	584	624	664	704	24	744	784	824	864	904	944
523	564	605	646	687	728	25	769	810	851	892	933	974
542	584	626	668	710	752	26	794	836	878	920	962	1004
561	604	647	690	733	776	27	819	862	905	948	991	1034
580	624	668	712	756	800	28	844	888	932	976	1020	1064
599	644	689	734	779	824	29	869	914	959	1004	1049	1094
618	664	710	756	802	848	30	894	940	986	1032	1078	1124

Square Feet in the Ceiling and Four Walls of Rooms—Cont.

8-Foot Ceilings

FEET WIDE							FEET WIDE					
15	16	17	18	19	20	Feet Long	21	22	23	24	25	26
AREA SQUARE FEET							AREA SQUARE FEET					
333	352	371	390	409	428	3	447	466	485	504	523	542
364	384	404	424	444	464	4	484	504	524	544	564	584
395	416	437	458	479	500	5	521	542	563	584	605	626
426	448	470	492	514	536	6	558	580	602	624	646	668
457	480	503	526	549	572	7	595	618	641	664	687	710
488	512	536	560	584	608	8	632	656	680	704	728	752
519	544	569	594	619	644	9	669	694	719	744	769	794
550	576	602	628	654	680	10	706	732	758	784	810	836
581	608	635	662	689	716	11	743	770	797	824	851	878
612	640	668	696	724	752	12	780	808	836	864	892	920
643	672	701	730	759	788	13	817	846	875	904	933	962
674	704	734	764	794	824	14	854	884	914	944	974	1004
705	736	767	798	829	860	15	891	922	953	984	1015	1046
736	768	800	832	864	896	16	928	960	992	1024	1056	1088
767	800	833	866	899	932	17	965	998	1031	1064	1097	1130
798	832	866	900	934	968	18	1002	1036	1070	1104	1138	1172
829	864	899	934	969	1004	19	1039	1074	1109	1144	1179	1214
860	896	932	968	1004	1040	20	1076	1112	1148	1184	1220	1256
891	928	965	1002	1039	1076	21	1113	1150	1187	1224	1261	1298
922	960	998	1036	1074	1112	22	1150	1188	1226	1264	1302	1340
953	992	1031	1070	1109	1148	23	1187	1226	1265	1304	1343	1382
984	1024	1064	1104	1144	1184	24	1224	1264	1304	1344	1384	1424
1015	1056	1097	1138	1179	1220	25	1261	1302	1343	1384	1425	1466
1046	1088	1130	1172	1214	1256	26	1298	1340	1382	1424	1466	1508
1077	1120	1163	1206	1249	1292	27	1335	1378	1421	1464	1507	1550
1108	1152	1196	1240	1284	1328	28	1372	1416	1460	1504	1548	1592
1139	1184	1229	1274	1319	1364	29	1409	1454	1499	1544	1589	1634
1170	1216	1262	1308	1354	1400	30	1446	1492	1538	1584	1630	1676

Explanation—For the total square feet in a room 20 feet wide and 30 feet long, ceiling 8 feet high, run down the 20-ft. column and opposite 30 read 1400 square feet.

Approximate Number of Wire Nails per Pound

American Steel & Wire Company's Steel Wire Gauge	LENGTH												
	3/16	1/4	3/8	1/2	5/8	3/4	7/8	1	1 1/8	1 1/4	1 1/2	1 3/4	2
3/8	.....	.....	.....	.....	.....	.....	.....	29	26	23	20	17	15
5/16	.....	.....	.....	.....	.....	.....	.....	43	38	34	29	25	22
1	.....	.....	.....	.....	.....	.....	.....	47	44	40	34	29	26
2	.....	.....	.....	.....	.....	.....	.....	60	54	48	41	35	31
3	.....	.....	.....	.....	.....	.....	.....	67	60	55	47	41	36
4	.....	.....	.....	.....	.....	.....	.....	81	74	66	55	48	41
5	.....	.....	.....	.....	.....	.....	.....	90	81	74	61	52	45
6	.....	.....	.....	213	174	149	128	113	101	91	76	65	58
7	.....	.....	.....	250	205	174	148	132	120	110	92	78	70
8	.....	.....	.....	272	238	198	174	153	139	126	106	93	82
9	.....	.....	.....	348	286	238	213	185	170	152	128	112	99
10	.....	.....	.....	469	373	320	277	242	216	196	165	142	124
11	.....	.....	.....	510	417	366	323	285	254	233	200	171	149
12	.....	.....	.....	740	603	511	442	405	351	327	268	229	204
13	.....	.....	1356	1017	802	688	590	508	458	412	348	297	260
14	.....	2293	1664	1290	1037	863	806	667	610	536	459	406	350
15	.....	2899	2213	1619	1316	1132	971	869	787	694	578	501	437
16	.....	3932	2720	2142	1708	1414	1229	1099	973	872	739	635	553
17	.....	5316	3890	2700	2306	1904	1581	1409	1253	1139	956	831	746
18	.....	7520	5072	3824	3130	2608	2248	1976	1760	1590	1338	1150	996
19	.....	9920	6860	5075	4132	3508	2816	2556	2284	2096	1772	1590	1390
20	18620	14050	9432	7164	5686	4795	4230	3596	3225	2893	2412	2070	1810
21	23260	17252	12000	8920	7232	6052	5272	4576	4020	3640	3040	2665	2310
22	28528	21508	14676	11776	9276	7672	.....	.....	.....	.....	.....	.....	.....
23	35864	27039	18026	13519	10815	9013	.....	.....	.....	.....	.....	.....	.....
24	44936	34018	22678	17008	13607	11339	.....	.....	.....	.....	.....	.....	.....
25	57357	43243	28828	21622	17297	14414	.....	.....	.....	.....	.....	.....	.....

These approximate numbers are an *Average* only, and the figures given may be varied either way, by changes in the dimensions of the heads or points. Brads and no-head nails will run more to the pound than table shows, and large or thick-headed nails will run less.

Approximate Number of Wire Nails per Pound—Cont.

American Steel & Wire Co.'s Steel Wire Gauge	LENGTH														
	2¼	2½	2¾	3	3½	4	4½	5	6	7	8	9	10	11	12
⅜	15	12	11	11	8.9	7.9	7.1	6.4	5.2	4.5	4.0	3.4	3.2	2.9	2.7
5/16	20	18	16	15	13	11	10	9.0	7.6	6.5	5.7	5.0	4.5	4.1	3.8
1	23	21	20	18	16	14	12	11	9.3	8.0	7.0	6.3	5.7	5.2	4.7
2	28	25	23	21	18	16	14	13	11	9.3	8.1	7.2	6.6	6.1	5.6
3	32	29	27	25	21	18	16	15	12	11	9.4	8.3	7.6	7.1	6.6
4	37	34	31	29	25	22	20	18	15	13	11	9.8	8.9	8.1	7.5
5	41	38	35	32	28	24	22	21	18	16	14	12	12	11	9.6
6	52	47	43	39	34	29	26	24	20	18	16	15	13	11	11
7	61	55	53	51	40	35	31	28	24	19	18	16	14	13	12
8	74	66	61	56	48	42	38	34	28	24	21	19	17	15	14
9	87	79	71	67	58	50	45	41	34	29	25	23	21	19	17
10	111	100	91	84	71	62	55	49	42	36	31	27	25	23	21
11	136	122	111	103	87	77	69	61	52	44	39	35	31	29	26
12	182	161	149	137	118	103	95	87	71	63	56	50	45	40	36
13	232	209	190	175	153	138	123	110	93	.....	.....	.....	.....	.....	.....
14	312	278	256	233	201	176	157	140	117	.....	.....	.....	.....	.....	.....
15	390	351	317	290	246	220	196	177	145	.....	.....	.....	.....	.....	.....
16	496	452	410	370	318	277	248	226	.....	.....	.....	.....	.....	.....	.....
17	666	590	532	486	418	360	322	295	.....	.....	.....	.....	.....	.....	.....
18	890	820	740	680	585	507	448	412	.....	.....	.....	.....	.....	.....	.....
19	1205	1060	970	895	800	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
20	1620	1450	1315	1215	1035	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
21	2020	1830	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
22	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
23	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
24	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

These approximate numbers are an *Average* only, and the figures given may be varied either way, by changes in the dimensions of the heads or points. Brads and no-head nails will run more to the pound than table shows, and large or thick-headed nails will run less.

Estimating Millwork

Contractors, painters, jobbers, carpenters and architects are sometimes unable to list millwork in mill terms. The following sequence by which building material men can readily list millwork for a complete house will be found very helpful.

This arrangement is a progressive one; that is, you start with the first items needed and by listing the ones needed next, the estimator proceeds the same as if he were constructing a building.

If all contractors, builders, carpenters and architects would submit a millwork list to the mills instead of a plan, they would get a price without a list of omissions that causes quite a bit of trouble at the end of the contract and in some cases a lawsuit.

There is no set rule for figuring material, but by following an arrangement that covers all items, there is very little danger of missing anything.

The following sequence was used for all types of buildings from a one car garage to an elaborate residence.

There are several things to remember on all millwork items and should never be omitted. They are:—the kind of wood, the width, the height and the thickness. All sizes and descriptions of articles given in this text are for example only.

Sequence

Frames

1. Cellar
2. Door
3. Window
4. Plank
5. Casement
6. Louvre
7. Garage
8. Brick arch centers

Cornice

9. Gable
10. Gutter
11. Belt
12. Outside base
13. Panel strips
14. Half timber
15. Corner boards

Exterior Millwork

16. Hoods
17. Brackets
18. Porches
19. Rough sawn siding
20. Wavy cut siding

Interior Millwork

21. Plaster grounds
22. Windows & Sash
23. Exterior doors
24. Interior door frames
25. Interior door trim
26. Interior doors
27. Window trim
28. Interior mouldings
29. Case work
30. Stairs

(1) **Cellar frames**

1 Plank cellar frame 10 x 14 3lt.-1⅜ rabt. jamb 1¾ x 5¼ with brick mould for 8″ concrete wall cypress,

or

1 Steel cellar sash and frame 10 x 20—3 lt.

(2) **Door frames**

1 Cypress door frame 3-0 x 7-0 1¾ rabt. jamb 1¾ x 5½ outside casing 1⅛ x 4¼ oak sill 1¾ thick for 6″ frame wall,

or

1 Cypress door frame 3-0 x 7-0 1¾ rabt. jamb 1¾ x 5½ outside casing 1⅛ x 4¼ beveled for stucco 1¾ oak sill, for 6″ frame stucco wall,

or

1 Cypress door frame 3-0 x 7-0 1¾ rabt. jamb 1¾ x 5½ with 1⅜ x 1¾ brick mould for 9″ brick wall.

(3) **Window frames**

1 Box wood frame 26 x 24 1⅜ 2 lt. brick mould for 9″ brick wall,

or

1 Window frame 26 x 24 1⅜ 2 lt. outside casing 1⅛ x 4¼ for 6″ frame wall,

or

1 Window frame 26 x 24 1⅜ 2 lt. outside casing 1⅛ x 4¼ keyed for stucco.

(4) **Plank frames**

1 Plank sash frame 24 x 36 1⅜ rabt. 1 lt. jamb 1⅜ x 5¼ with brick moulding for 9″ brick wall,

or

1 Plank sash frame 24 x 36 1⅜ rabt. 1 lt. jamb 1⅜ x 5¼ with 1⅛ x 4¼ outside casing for 6″ frame wall,

or

1 Plank sash frame 24 x 36 1⅜ 1 lt. jamb 1⅜ x 5¼ with 1⅛ x 4¼ outside casing beveled for stucco.

(5) **Casement sash frames**

1 Casement sash frame for pair sash, each sash 14 x 36 1⅜ 1 lt. with brick mould for 9″ brick wall,

or

1 Casement sash frame for pair sash, each 14 x 36 1⅜ 1 lt. with 1⅛ x 4¼ outside casing for 6″ frame wall,

or

1 Casement sash frame for pair sash, each sash 14 x 36 1⅜ 1 lt. with 1⅛ x 4¼ outside casing beveled for stucco.

(6) **Louvre frames**

1 Louvre frame 24 x 36 for 9″ brick wall,

or

1 Louvre frame 24 x 36 for 6″ frame wall,

or

1 Louvre frame 24 x 36 for 6″ frame stucco wall.

(7) **Garage frame**

1 Garage door frame 8-0 x 7-6 1¾ rabt. jamb 1¾ x 5¼ with brick mould for 9″ brick wall,

or

1 Garage door frame 8-0 x 7-6 1¾ rabt. jamb 1¾ x 5¼ with 1⅛ x 4¼ outside casing for 6″ frame wall,

or

1 Garage door frame 8-0 x 7-6 1¾ rabt. jamb 1¾ x 5¼ with 1⅛ x 4¼ outside casing for 6″ frame stucco wall.

(8) **Brick arch centers**

Give width of opening, then height and radius and state the thickness of the brick or stone wall.

(9) **Gable cornice**

Lineal feet ¾ x 1⅜ edge strip
Lineal feet ¾ x 7½ S 4 S barge
Lineal feet ¾ x 3½ crown moulding or barge mld.
Lineal feet ⅝ x 3¼ Y.P. soffit (?) boards wide
Lineal feet ¾ x 1⅜ bed mould
Lineal feet ¾ x 5½ frieze

(10) **Gutter cornice**

Lineal feet ¾ x 7½ facia
Lineal feet ⅝ x 3¼ Y.P. soffit (?) boards wide
Lineal feet ¾ x 1¾ bed mould
Lineal feet ¾ x 5½ frieze

(11) **Belt**

Lineal feet 1⅛ x 1¾ water table or drip cap
Lineal feet ¾ x 7½ S 4 S

(12) **Outside base**

Lineal feet 1⅜ x 1¾ base cap or drip cap
Lineal feet ¾ x 7½ S 4 S

(13) **Panel strips**

Lineal ft. 1⅜ x 3½ panel strip, both edges keyed or beveled for stucco.

(14) **Half timber**

In listing half timbering, give lineal ft. or pieces and length and state thickness, kind of wood, and if rough sawn, S 4 S or hand edged, and if edges are chamferred

(15) **Corner boards**

Lineal ft. 1⅛ x 3½ S 4 S Cypress
Lineal ft. ¾ x ¾ quarter round Cypress

(16) **Hoods**

In listing hoods, give size of brackets and distance out from wall and give a pencil sketch.
List gable cornice same as item No. 9.
List gutter cornice same as item No. 10.
List hood ceiling and give amount in board feet.

(17) **Brackets**

Cornice brackets, etc.—list same as hood brackets and give pencil sketch.

(18) **Porches**

In listing porch material, it is best to list the porch complete.
Gable cornice same as item No. 9.
Gutter cornice same as item No. 10.
Lintels, give width, height and length.
Ceiling, give size of material and board feet measure.
Bed mould, give size and amount in lin. feet.
Columns, give size and height and state if plain or panelled.
Newels, give size and height and state if plain or panelled.
Pilasters, give size and height.
Porch rail, give length and height, state size of balusters and if nailed up.
Flooring, give size and amount in board feet measure.
Base, give size and amount in lin. ft.
Cove, give size and amount in lin. ft.
Lattice panels, give size,—width first, height next. Give dimension of frame material and then the size of the lattice strips and state if they are to run diagonally or horizontally and vertical.

(19) **Rough sawn siding**

Give amount in feet board measure.
Give thickness and width, and state rough sawn.

20) **Wavy cut siding**

Give amount in feet board measure.
Give thickness and width and state lower edge cut wavy.

(21) **Plaster grounds**

(a) Give number of sets of window grounds and state size.
(b) Give number of sets of door grounds and state size.
(c)Give lin. ft. of base grounds and state size
(d) Give lin. ft. of wainscot grounds.
(e) Give lin. ft. of picture mould and cornice grounds and give size.
(f) Plastered arch centers, give size.
Example, 1 Plas. arch center 3-0 wide, 4″ stud wall cut on 4-0 radius.

(22) **Windows and sash**

Sizes below are glass openings list width first then height.
State kind of wood, if check rail and lugs are wanted for 2 lt. windows.
(a) 1 plank cellar sash 10 x 20 3 lt. 1⅜.
(b) 1 wd. 28 x 26 1⅜ 2 lt. ck. rl. and lugs,

or

1 wd. 28 x 26 1⅜ 2 lt. ck. rl. and lugs top sash cut 3 lts. wide,

or

1 wd. 26 x 26 1⅜ 2 lt. ck. rl. and lugs top sash cut 3 wide, 2 high.
(c) 1 pair casement sash, each sash 14 x 26 1⅜ 1 lt,

or

1 pair casement sash, each sash 14 x 26 1⅜ 1 lt. divided 2 lts. wide, 4 lts. high.
(d) 1 plank sash 24 x 26 1⅜ 1 lt.

or

1 plank sash 24 x 26 1⅜ 1 lt. divided 4 lts. wide,

or

1 plank sash 24 x 26 1⅜ 1 lt. divided 4 lts. wide, 2 lts. high.
(e) 1 transom 32 x 9 1⅜, 1 lt.

(23) **Exterior doors**

Give width, height and thickness. Give size of glass, and if divided; give description of door below the glass and state kind of wood; also give pencil sketch.

Example:

1 door 3-0 x 7-0 1¾, 1 lt. top, 24 x 36 div.
2 wide, 3 high, lower section of door to have
3 cross raised panels, all white pine.

(24) **Interior door frames**

Give width, height and rabt. Give thickness of jamb and width, and state kind of wood.

Example:

1 inside door frame 2-6 x 6-8 1⅜ rabt. jamb 1⅜ x 5⅜ Y.P.

(25) **Interior door trim**

Give design and dimensions and kind of wood; and list out in sets.

Example: Back band trim

1 side 3-0 x 7-0 Gum.
1 side 2-6 x 6-8 Y.P.
1 side 2-6 x 6-8 Gum.
1 side 2-4 x 6-8 Y.P. closet.

(26) **Interior doors**

State kind of make, and give stock number, or give description, such as,—
2 vertical panel, 2 panel regular or one panel, and mention kind of wood.

Example:

1 door 2-8 x 6-8 x 1⅜ one panel Gum.
1 door 2-8 x 6-8 x 1⅜ 2 vertical panel W.P.
1 door 2 x 6-8 x 1⅜ 6 panel W.P.
1 door 2 x 6-8 x 1⅜ 2 panel regular W.P.

(27) **Window trim**

Give design and dimensions, and kind of wood and list out in sets.

Example:

Back band design.
1 side 26 x 26 2 lt.
1 side plank sash trim 24 x 26 1 lt. Gum.
1 side casement sash trim for pair sash, each sash 24 x 36 1 lt. Y.P.
(Note) Window trim with jamb lining for 13″, 15″ and 18″ walls should be listed here and stated with each set for the certain thickness of walls.

(28) **Interior mouldings**

(a) List threshhold, give length and kind of wood.
(b) Cornice mould, amount lin. ft. and kind of wood.
(c) Base, amount lin. ft. size, design and kind of wood.
(d) Shoe, amount lin. ft., size, design & kind of wood.
(e) Closet base, amt. lin. ft., size, design and kind of wood.

(f) Closet shoe, (amt. lin. ft., size, design and kind of wood).
(g) Picture mld., (amt. lin. ft., size, design and kind of wood).
(h) Chair rail, (amt. lin. ft., size, design and kind of wood).
(i) Hood strip, (amt. lin. ft., size, design and kind of wood).
(j) Shelving, (amt. lin. ft., size, design and kind of wood).
(k) Cleat, (amt. lin. ft., size, design and kind of wood).
(l) Ceiling beams, (amt. lin. ft., size, design and kind of wood).
(m) Cedar closet lining. Give ft. board measure.

(29) **Case work**

(a) Medicine Case—state whether of metal or wood, size or stock number; size of glass and stud opening.
(b) Kitchen cases—state kind of wood, width, height and depth of top section, and also depth of lower section; also, if back is to be of wood or plaster, and if case is to set in recess, or if ends are exposed and paneled—it is best to give a pencil-sketch, or if taken from catalogue, give stock number.
(c) Mantel shelf—state kind of wood, width of mantel breast, depth of shelf, thickness and if ends are returned.
(d) Book cases—state kind of wood, width, height and depth, kind of doors, number of shelves and if case is to set in recess, or if ends are exposed.
(e) Window seats—state kind of wood, length, depth and thickness, and if top is hinged; also height of back, and if paneled. Give height of front and if paneled.
(f) Panels—state kind of wood, width, height and thickness. Give width and thickness of stiles and rails, and state if panel is built up of veneer or solid and raised type.
(g) Ironing boards—state kind of wood, width, height and depth, and give catalogue number if possible.
(h) Breakfast nook sets—state kind of wood, and it is best to give size of space into which the set is to go, and mention table and two benches, or table and one bench, as the case may be; and if possible, give stock number or detail.

(i) Phone cabinets—state kind of wood and give catalogue number or sketch.
(j) Scuttle door frame and trim—state kind of wood. Give length and width of frame and thickness of door, and kind of trim.
(k) Plumbers door frame and trim—state kind of wood. Give width and height of frame, also width of jamb and thickness of door and kind of trim.
(l) Clothes chute door frame and trim—state kind of wood. Give width and height of frame; also width of jamb and thickness of door and kind of trim.

(30) **Stairs**

In listing stairs, give width, number of treads and risers, kind of wood; also if stairs are box type, open string or closed string. Give stock number of newel and balusters, if any, and sketch of floor plan.
Several items on above list should be subject to measurements by the mill, and should be so stated on list, and mill notified when the items are ready for measure. In general, these items are:—
Inside doors, frames and trim.
All case work.
Mantel shelves.
Paneling.
Stairs.

Sizes of Wire

American Steel & Wire Co.'s Steel Wire Gauge



American Steel & Wire Company's STEEL WIRE GAUGE No.	Sizes of Wire		Weight One Mile Pounds	Pounds per Foot	Feet to Pound
	Common Fractions	Decimally			
1		.2830	1128.0	.2136	4.681
	9/32	.28125	1114.0	.211	
2		.2625	970.4	.1838	5.441
	1/4	.250	880.2	.1667	
3		.2437	836.4	.1584	6.313
4		.2253	714.8	.1354	7.386
	7/32	.21875	673.9	.1276	
5		.2070	603.4	.1143	8.750
6		.1920	519.2	.0983	10.17
	3/16	.1875	495.1	.0937	
7		.1770	441.2	.0835	11.97
8		.1620	369.6	.070	14.29
	5/32	.15625	343.8	.0651	
9		.1483	309.7	.0586	17.05
10		.1350	256.7	.0486	20.57
	1/8	.1250	220.0	.0416	
11		.1205	204.5	.0387	25.82
12		.1055	156.7	.0296	33.69
	3/32	.09375	123.8	.0234	
13		.0915	117.9	.0223	44.78
14		.0800	90.13	.0170	58.58
15		.0720	73.01	.0138	72.32
16	1/16	.0625	55.0	.0104	95.98
17		.0540	41.07	.0077	128.6
18		.0475	31.77	.006	166.2
19		.0410	23.67	.0044	223.0
20		.0348	17.05	.0032	309.6

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Automobile Wires and Cables
Automobile Springs
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Bale Ties for baling hay, paper, rags, waste materials, etc.
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Bell Wire
Bookbinding Wire
Broom Wire
Cold Rolled Strips
Cold Rolled Strip Steel
Copper Wire
Corn Cribs (Wire)
Concrete Reinforcement
Door Springs
Electrical Wires and Cables
Flat Wire—Cold Rolled Strip Steel
Florist Wire
Fox Farm Wire Netting
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Fences, Wire
Fence Gates
Fence Wire
Fence Posts
Fence Tools
Galvanized Wire
High Carbon Wires
Highway Guard Wire Cables
Ignition Wires and Cables
Lamp Cords
Lawn Fence
Low Carbon Wires
Mattress Wire
Magnet Wire
Nails of every description (Wire)
Netting, Wire
Park and Suburban Cables
Piano Wire
Plain Wire
Poultry Fence
Poultry Netting
Poultry Fence Gates
Power Cables
Rail Bonds

Radio Wires
Ribbon Wire
Rubber Covered Electrical Wires
Signal Wire
Signal Bonds
Steel Fence Posts
Screw Stock
Springs of every description
Spring Wire
Stucco Reinforcement
Strand, Wire
Submarine Power Cables
Spikes
Staples
Sulphate of Iron
Tacks
Telephone and Telegraph Wire
Trolley Wire
Welding Wire
Wire Clothes Lines
Wire Hoops
Wire Rope
Wire Strand
Woven Wire Fences
Wire Rods

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Round, Flat, Square, Oval, Octagon or other shapes
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Pin Wire
Bolt, Rivet and Screw Wire
Music Spring Wire
Pump Rod Bars
Wool Wire
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Pinion Wire
Basic and Bessemer Screw Stock
Flat Nut Stock
Hair Pin Wire
Mattress Wire
Piano Wire and Rods
Also Bright, Annealed, Coppered, Liquor-finish, Tinned and Galvanized Wire for various manufacturing purposes

Literature

Descriptive literature is available for every product mentioned above. Please address your requests to Literature Department, American Steel & Wire Company, Rockefeller Building, Cleveland, Ohio.

American Steel & Wire Company's E-Z Open Safety Keg

(Patented—No. 2,071,219)

The protection of all who use and handle nails is a paramount issue. This improved keg with the E-Z Pull Heading Nail prevents torn clothing, ripped fingers and arms. It stops flying broken splinters from keg heads causing injury to the face and eyes.

Keg heads are removable in less than a half minute without damage to the keg, the head, or the workman. No bent protruding nails are left inside of the keg to injure the hands or arms when contents are removed.

These E-Z Pull Nails are adaptable to other types of packages where it is desirable to have maximum safety and to re-use the crate or container. They are readily adaptable to the smallest or largest package.

Try these E-Z Pull Heading Nails at the next opportunity and see how easily they can solve your packing, crating or scaffolding nail problems.

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UNITED STATES STEEL

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